Lisa C. Lance (No. 038506)
14920 W. Camelback Road
Litchfield Park, AZ 85340
Telephone: 623.298.3770
Lisa.Lance@libertyutilities.com

Attorney for Liberty Utilities (Litchfield Park Water & Sewer) Corp.

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

JIM O'CONNOR, Chairman
LEA MÁRQUEZ PETERSON
ANNA TOVAR
NICK MYERS
KEVIN THOMPSON

IN THE MATTER OF THE APPLICATION OF LIBERTY UTILITIES (LIBERTY LITCHFIELD PARK WATER & SEWER) CORP. FOR AN EXTENSION OF ITS EXISTING CERTIFICATE OF CONVENIENCE AND NECESSITY	DOCKET NO: SW-01428A-24 **APPLICATION FOR EXTENSION OF CERTIFICATE OF CONVENIENCE AND NECESSITY**

In accordance with A.A.C. R14-2-602, Liberty Utilities (Litchfield Park Water & Sewer) Corp. ("Liberty Litchfield Park" or "Applicant"), an Arizona public service corporation, applies to the Arizona Corporation Commission ("Commission") for an order approving the extension of Liberty Litchfield Park's existing Certificate of Convenience and Necessity ("CC&N") for wastewater utility service to include the development known as Luke Field (the "Extension Area" or the "Property"), which is located in certain defined portion of Maricopa County, Arizona, as hereinafter defined.

LUKE FIELD

1. Luke Field development (also referred to as the "Property" or "Extension

Area") is described as an industrial development. Luke Field consists of approximately 139-acres (gross) and is located east of Litchfield Road between Northern Avenue and the Dysart Drain and will remain in unincorporated lands within Maricopa County.

2. Luke Field is owned by Northern Parkway Owner, LLC, a Delaware limited liability company (the "Luke Field Owner"). Lincoln Property Company Commercial, LLC, a Texas limited liability company, is the managing member of Northern Parkway Owner, LLC, a joint venture for the development of Luke Field.

3. The Luke Field Owner has retained EPS Group as the civil project engineer for the sewer main extension required for the connection to Liberty Litchfield Park's sewer collection system. The development commenced construction in the first quarter of 2024 and be fully built out in the fourth quarter of 2024. The onsite sewer system will be designed in accordance with Liberty Litchfield Park's guidelines.

4. The water supplied to Luke Field will be provided from Valley Utilities' existing water supply wells and delivery system.

5. The Luke Field Owner has requested Liberty Litchfield Park to provide sewer services to Luke Field. *See* **Exhibit 1** for formal request for service. All wastewater flows generated by Luke Field will be delivered to Liberty Litchfield Park's wastewater collection system. Luke Field will be served from 8-inch sewer mains running in the proposed development into Liberty Litchfield Park's sewer collection system.

6. All wastewater flows generated by Luke Field will be delivered to Liberty Litchfield Park's existing Palm Valley Water Reclamation Facility ("PVWRF"). The Property will be served from 8-inch sewer mains running in the proposed streets with an outfall to a new Liberty Litchfield Park lift station.

CC&N EXTENSION APPLICATION

7. Applicant's legal name, mailing address and telephone number are: Liberty Utilities (Litchfield Park Water & Sewer) Corp., 14920 W. Camelback Road, Litchfield Park, Arizona, 85340, (623) 935-9367. Applicant is a public service corporation formed for the purpose of providing wastewater utility service in Maricopa County, Arizona. Liberty Litchfield Park is a private water and wastewater utility company in the Phoenix

Active Management Area. Liberty Litchfield Park holds CC&Ns issued by the Commission authorizing Liberty Litchfield Park to provide public water and wastewater utility service within its certificated service areas. Liberty Litchfield Park's CC&Ns generally encompasses an approximately 22 square-mile area west of the Agua Fria River between Luke Air Force Base and interstate highway I-10.

8. The name, address, and corporate structure for Liberty Litchfield Park is set forth in the attached **Exhibit 2**, including the amount of stock authorized and subsequently issued. The names, titles, and mailing addresses for Liberty Litchfield Park's officers and directors are also set forth on the attached **Exhibit 2**. Liberty Litchfield Park does not own an interest in any other utility companies. Liberty Litchfield Park's parent company owns six other public service corporations providing water and wastewater utility service in Arizona.

9. Liberty Litchfield Park's Certificate of Good Standing from the Commission is attached hereto as **Exhibit 3.**

10. Liberty Litchfield Park's management contact is Moses Thompson, President (AZ/TX), 14920 W. Camelback Road, Litchfield Park, Arizona, 85340. Mr. Thompson's telephone number is (623) 695-4342 and his email address is Moses.Thompson@libertyutilities.com.

11. Liberty Litchfield Park's operator certified by the Arizona Department of Environmental Quality ("ADEQ") is Terry Gilbertson, Senior Operations Manager, whose business address is 14222 W. McDowell Rd, Goodyear, AZ 85395. Mr. Gilbertson's telephone number is (623) 298-4825.

12. Liberty Litchfield Park's attorneys for this application are as follows:

Lisa C. Lance
Director, Legal Services
14920 W. Camelback Road
Litchfield Park, AZ 85340

Telephone: (602) 550-3846

Email: Lisa.Lance@libertyutilities.com

All case filings, correspondence, data requests and/or other requests for information should be directed to Ms. Lance.

13. The Extension Area (which is also the Property) is owned entirely by the Luke Field Owner. As a result, there are no landowners within the Extension Area that are not requesting an extension of wastewater utility services by Liberty Litchfield Park.

14. The legal description for the Extension Area for Luke Field is detailed in **Exhibit 4** and, is as follows:

A portion of Northwest Quarter of Section 3, Township 2 North, Range 1 West, of the Gila and Salt River Meridian, Maricopa County, Arizona, and more particularly described as follows:

COMMENCING at a brass cap in a hand hole at the north quarter corner of said Section 3, from which a brass cap in hand hole at the northwest corner of said Section 3, bears North 89 degrees 12 minutes 48 seconds West (basis of bearing) 2,629.01 feet;

thence along the East line of said Northwest Quarter, South 2 degrees 04 minutes 48 seconds East,
40.05 feet to the POINT OF BEGINNING;

thence continuing along said East line, South 2 degrees 04 minutes 48 seconds East, 2,571.05 feet;

thence along the North line of the South 10.00 feet of said Northwest Quarter, North 89 degrees 01 minutes 37 seconds West, 1,423.34 feet;

thence North 2 degrees 09 minutes 46 seconds West, 403.98 feet;

thence South 87 degrees 50 minutes 14 seconds West, 1,018.47 feet;

thence North 36 degrees 23 minutes 58 seconds West, 224.98 feet;

thence along the East line of the West 55.00 feet of said Northwest Quarter, North 2 degrees 10 minutes 35 seconds West, 2,035.65 feet;

thence along the South line of the North 40.00 feet of said Northwest Quarter, South 89 degrees 12 minutes 48 seconds East, 195.26 feet;

thence South 2 degrees 10 minutes 35 seconds East, 15.02 feet;

thence along the South line of the North 55.00 feet of said Northwest Quarter, South 89 degrees 12 minutes 48 seconds East, 998.36 feet;

thence South 9 degrees 03 minutes 38 seconds East, 78.16 feet;

thence South 0 degrees 49 minutes 37 seconds West, 22.00 feet;

thence North 89 degrees 10 minutes 23 seconds West, 4.00 feet;

thence North 0 degrees 49 minutes 37 seconds East, 22.00 feet;

thence North 89 degrees 10 minutes 23 seconds West, 31.00 feet;

thence South 2 degrees 07 minutes 23 seconds East, 194.26 feet;

thence South 89 degrees 10 minutes 23 seconds East, 362.00 feet;

thence North 0 degrees 49 minutes 37 seconds East, 271.25 feet;

thence along the South line of the North 55.00 feet of said Northwest Quarter, South 89 degrees 12 minutes 48 seconds East, 368.98 feet;

thence North 2 degrees 04 minutes 48 seconds West, 15.02 feet;

thence along the South line of the North 40.00 feet of said Northwest Quarter, South 89 degrees 12 minutes 48 seconds East, 660.83 feet to the POINT OF BEGINNING.

Containing an area of 6,031,168 square feet or 138.4566 acres, more or less.

15. The Extension Area is currently located in unincorporated lands within Maricopa County and will remain in unincorporated lands within Maricopa County. The cities of Surprise, Youngtown, Glendale, Goodyear, El Mirage, Litchfield Park, Phoenix, Peoria, and Avondale also are located within five miles of the Extension Area. *See* **Exhibits 10A&B** for simple maps of the existing service area and the municipalities within a five-mile radius.

16. Liberty Litchfield Park currently operates a wastewater system in the area and its current wastewater CC&N boundaries are within one mile of the Extension Area.

17. The off-site wastewater engineering report dated November 28, 2023 is attached as **Exhibit 5A** and shows the necessary off-site infrastructure upgrades and on-site wastewater facilities to be installed including: (i) a lift station and an 8-inch diameter force main to pump sewer flows from the Extension Area across the Dysart Drain and then south within Dysart Road to Rose Lane; (ii) a quarter mile extension of the 8-inch diameter force main that exits the Casitas Bonitas Lift Station to Rose Lane; and (iii) approximately 3/4 mile of 15-inch diameter gravity sewer line south within Dysart Road to an existing 15-inch diameter gravity sewer line that begins at the southwest corner of the Dysart/Missouri intersection and eventually ends up at the Palm Valley Water Reclamation

Facility. The on-site wastewater engineering report dated November 8, 2023 attached as **Exhibit 5B** shows the on-site sewer lines.

18. The maps included with the engineering report further show the proposed location of the principal components of the wastewater system planned for the Extension Area.

19. Connection of the facilities to service the area will be completed after the approval of the extension of the CC&Ns and after the completion of Liberty Litchfield Park's new wastewater treatment facility, Sarival Water Reclamation Facility.

20. Documentation supporting the estimated total cost for construction of the facilities required to provide wastewater services to the Extension Area is attached as **Exhibits 6A and 6B**. Construction of the required on-site facilities and off-site facilities will be financed using advances in aid of construction ("AIAC"), which may be offset by hook-up fees in accordance with the Tariff.

21. For service to the Extension Area, Liberty Litchfield Park will be charging its tariff rates and charges as approved by the Commission. A copy of Liberty Litchfield Park's existing tariff schedules is attached as **Exhibit 7.**

22. A general Statement of Financial Condition for Liberty Litchfield Park is attached as **Exhibit 8.**

23. Liberty Litchfield Park's estimated annual operating revenue and operating expenses, projected income statements, projected balance sheets and plant expenditures for the first five years of operation in the Extension Area are shown in **Exhibit 9**.

24. Liberty Litchfield Park is the only regulated utility providing wastewater service within one mile of the Extension Area. A detailed map of Liberty Litchfield Park's existing wastewater CC&N areas and the Extension Area is attached as **Exhibit 10A.** This map also includes:

- the boundaries of the Extension Area, with the total acreage noted;
- the owner of the parcel within the Extension Area; and
- the location of all parcels for which a copy of a request for service has been

submitted.

Exhibit 10B is a map of municipalities within a 5-mile Radius.

25. A copy of the form of notice to be sent to managers/administrators for municipalities within a five-mile radius of the Extension Area is attached as **Exhibit 11**.

26. The estimated number of customers to be served during the first five years of wastewater utility service to the Extension Area are shown in **Exhibit 12**.

27. The Extension Area (APN's 501-52-005M) is located within Liberty Litchfield Park's approved Maricopa Association of Governments ("MAG") planning area.

28. Liberty Litchfield Park will be submitting a franchise application to the Maricopa County Board of Supervisors after the approval of this Application to include the Extension Area.

29. Approvals to Construct will be obtained from ADEQ and provided to the Commission as soon as they are issued and received.

30. Liberty Litchfield Park will accept and transport all wastewater generated within the Extension Area to the Utility's Wastewater Treatment Facility.

31. Liberty Litchfield Park's Aquifer Protection Permit ("APP") issued by the Arizona Department of Environmental Quality ("ADEQ") is attached as **Exhibit 13**.

32. Liberty Litchfield Park's wastewater use data sheets for the period from June 2021 through December 2023 are attached as **Exhibit 14**.

33. ADEQ's *Substantive Policy – 4.01 General Permits as it relates to Wastewater Treatment Plant ("WWTP") Capacity* (the "ADEQ Policy") has become effective. In addition, on January 25, 2023, ADEQ issued the APP to Liberty Litchfield Park for Sarival WRF in the amount of 4.4 million gallons per day ("MGD"). The combined impact of these two actions means that ADEQ recognizes that Liberty has 4.4 MGD of available wastewater treatment capacity for purposes of determining whether Liberty has sufficient capacity to serve new developments and issuance of approvals to construct for new developments. Consistent with this ADEQ Policy and the issuance of the Sarival WRF APP, Liberty has sufficient wastewater capacity for purposes of granting

these CC&N extension applications. The ADEQ Policy is attached as **Exhibit 15** and Sarvial WRF's APP is attached as **Exhibit 16.**

34. A notarized Affidavit in support of this Application on behalf of Liberty Litchfield Park is attached as **Exhibit 17**.

35. For the reasons stated herein, Liberty Litchfield Park maintains that this Application is in the public interest and should be granted. There is a need for regulated wastewater utility services to the Extension Area in Maricopa County to ensure the public health and foster orderly growth.

WHEREFORE, Liberty Litchfield Park respectfully requests the following:

A. That the Commission consider and act upon this Application as timely as possible and schedule a hearing, if necessary, on this matter;

B. That upon completion of said hearing, the Commission enter an Order approving this Application and extending Liberty Litchfield Park's wastewater CC&N to include the Extension Area as described in Exhibit 4; and,

C. That the Commission grant such other and further relief as may be appropriate under the circumstances herein.

RESPECTFULLY SUBMITTED this 20th day of August, 2024.

LIBERTY UTILITIES (LITCHFIELD PARK WATER & SEWER) CORP.

By: */s/* Lisa C. Lance

Lisa C. Lance
Director of Legal Services, Arizona
14920 W. Camelback Road
Litchfield Park, Arizona 85340

Attorneys for Liberty Utilities (Litchfield Park Water & Sewer) Corp.

ORIGINAL eFiled
this 20th day of August, 2024 with:

Docket Control
Arizona Corporation Commission
1200 W. Washington Street
Phoenix, AZ 85007
/s/ Regina Wise

EXHIBITS

Exhibit 1 – Luke Field Request for Service.

Exhibit 2 – Corporate Information for Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Exhibit 3 – Certificate of Good Standing from the Arizona Corporation Commission.

Exhibit 4 – Legal Description of the Extension Area – Luke Field.

Exhibit 5 – Engineering On-site Wastewater Report (Ex. 5).

Exhibit 5A - Engineering Off-site Wastewater Report (Ex. 5A).

Exhibit 6A – Estimate of Project Costs.

Exhibit 6B – Estimate of Project Costs.

Exhibit 7 – Liberty Litchfield Park's Tariff Rate Schedules.

Exhibit 8 – General Statement of Financial Condition – Comparative Income Statement.

Exhibit 9 – Estimated Annual Operating Revenue and Expenses, Income Statements, Balance Sheets and Plant Expenditures – First Five Years.

Exhibit 10A – Map of Existing Service Area and Map of Extension Wastewater Service Area.

Exhibit 10B – Map of Municipalities Within a Five-Mile Radius.

Exhibit 11 – Form of Notice to be Sent to Municipalities Within 5 Miles of Extension Area.

Exhibit 12 – Estimated Number of Customers – First Five Years.

Exhibit 13 – PVWRF ADEQ Aquifer Protection Permit.

Exhibit 14 – Wastewater Use Data Sheet.

Exhibit 15 – ADEQ Policy

Exhibit 16 – Sarival WRF ADEQ Aquifer Protection Permit

Exhibit 17 – Notarized Affidavit on Behalf of Liberty Litchfield Park.

Exhibit 1

Luke Field Request for Service

LINCOLN PROPERTY COMPANY | LPC DESERT WEST

To: Julie Baldwin
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
14920 W. Camelback Road
Litchfield Park, AZ 85340

Date: January 31ST 2023

Re: **Luke Field**
Request for Service

Ms. Baldwin,

This letter is submitted to you as outlined in your development guide to formally request service for the above referenced industrial development generally located east of Litchfield Road, between Northern Avenue and the Dysart Drain in Maricopa County, Arizona, more particularly described in Exhibit A, attached hereto. We acknowledge that the Project will not receive wastewater treatment service until the completion of the Casitas Bonitas and Sarival Water Reclamation Facility.

Below is a summary of the project information:

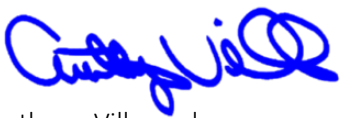
Owner / Developer contact info:

Owner:	Northern Parkway Owner LLC (in care of Lincoln Property Company)
Developer:	Lincoln Property Company
Contact:	Anthony Villarreal
Address:	3131 E. Camelback Road, Ste. 318 Phoenix, AZ 85016
Phone:	602-541-0987
Email:	avillarreal@lpc.com

Assessor Parcel No.(s):	501-52-005J & 501-52-005H
Area:	139-acres (gross) / 138-acres (net)
Number of Lots:	3
Number of Buildings:	3
Total Building Area:	2,400,000 square feet

Please do not hesitate to contact me directly should you have any additional questions or comments.

Regards,



Anthony Villarreal
Lincoln Property Company

Exhibit 2

Liberty Utilities Corporate Information

Exhibit 2: Corporate Information

Applicant Proper Name:	Liberty Utilities (Litchfield Park Water & Sewer) Corp.
Applicant Address:	14920 W Camelback Rd, Litchfield Park, AZ 85340
Corporate Structure:	For-profit Chapter "C" Corporation 1,000 Shares issued to Liberty Utilities (Sub) Corp.
Officers:	Moses Thompson, President 14920 W Camelback Rd, Litchfield Park, AZ 85340 Crystal Greene, Treasurer and Secretary 14920 W Camelback Rd, Litchfield Park, AZ 85340
Directors:	Chris Huskilson, President and CEO 354 Davis Road Oakville, ON L6J2X1 Sarah MacDonald Chief Transformation Officer 354 Davis Road Oakville, ON L6J2X1 Brian Thompson 14920 W Camelback Rd, Litchfield Park, AZ 85340

Christopher Robert Stump
14920 W Camelback Rd,
Litchfield Park, AZ 85340

Virginia L. Grebbian
913 Encanada Drive
La Habra Heights, CA 90631

Exhibit 3

Certificate of Good Standing from

the Arizona Corporation Commission

STATE OF ARIZONA

Office of the
CORPORATION COMMISSION

CERTIFICATE OF GOOD STANDING

I, the undersigned Executive Director of the Arizona Corporation Commission, do hereby certify that:

LIBERTY UTILITIES (LITCHFIELD PARK WATER & SEWER) CORP.

ACC file number: 00456262

was incorporated under the laws of the State of Arizona on 09/21/1954;

That all annual reports owed to date by said corporation have been filed or delivered for filing, and all annual filing fees owed to date have been paid; and

That, according to the records of the Arizona Corporation Commission, said corporation is in good standing in the State of Arizona as of the date this Certificate is issued.

This Certificate relates only to the legal existence of the above named entity as of the date this Certificate is issued, and is not an endorsement, recommendation, or approval of the entity's condition, business activities, affairs, or practices.

IN WITNESS WHEREOF, I have hereunto set my hand, affixed the official seal of the Arizona Corporation Commission, and issued this Certificate on this date: **05/13/2024**

Douglas R. Clark, Executive Director

Exhibit 4

Legal Description of Extension Area

Legal Description
Luke Field Property

Job No. 21-1329 December 9, 2022

A portion of Northwest Quarter of Section 3, Township 2 North, Range 1 West, of the Gila and Salt River Meridian, Maricopa County, Arizona, and more particularly described as follows:

COMMENCING at a brass cap in a hand hole at the north quarter corner of said Section 3, from which a brass cap in hand hole at the northwest corner of said Section 3, bears North 89 degrees 12 minutes 48 seconds West (basis of bearing) 2,629.01 feet;

thence along the East line of said Northwest Quarter, South 2 degrees 04 minutes 48 seconds East, 40.05 feet to the **POINT OF BEGINNING**;

thence continuing along said East line, South 2 degrees 04 minutes 48 seconds East, 2,571.05 feet;

thence along the North line of the South 10.00 feet of said Northwest Quarter, North 89 degrees 01 minutes 37 seconds West, 1,423.34 feet;

thence North 2 degrees 09 minutes 46 seconds West, 403.98 feet;

thence South 87 degrees 50 minutes 14 seconds West, 1,018.47 feet;

thence North 36 degrees 23 minutes 58 seconds West, 224.98 feet;

thence along the East line of the West 55.00 feet of said Northwest Quarter, North 2 degrees 10 minutes 35 seconds West, 2,035.65 feet;

thence along the South line of the North 40.00 feet of said Northwest Quarter, South 89 degrees 12 minutes 48 seconds East, 195.26 feet;

thence South 2 degrees 10 minutes 35 seconds East, 15.02 feet;

thence along the South line of the North 55.00 feet of said Northwest Quarter, South 89 degrees 12 minutes 48 seconds East, 998.36 feet;

thence South 9 degrees 03 minutes 38 seconds East, 78.16 feet;

thence South 0 degrees 49 minutes 37 seconds West, 22.00 feet;

thence North 89 degrees 10 minutes 23 seconds West, 4.00 feet;

thence North 0 degrees 49 minutes 37 seconds East, 22.00 feet;

thence North 89 degrees 10 minutes 23 seconds West, 31.00 feet;

thence South 2 degrees 07 minutes 23 seconds East, 194.26 feet;

thence South 89 degrees 10 minutes 23 seconds East, 362.00 feet;

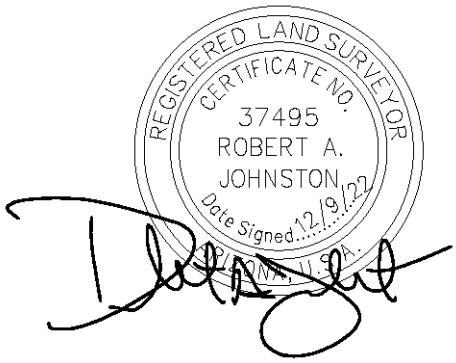
thence North 0 degrees 49 minutes 37 seconds East, 271.25 feet;

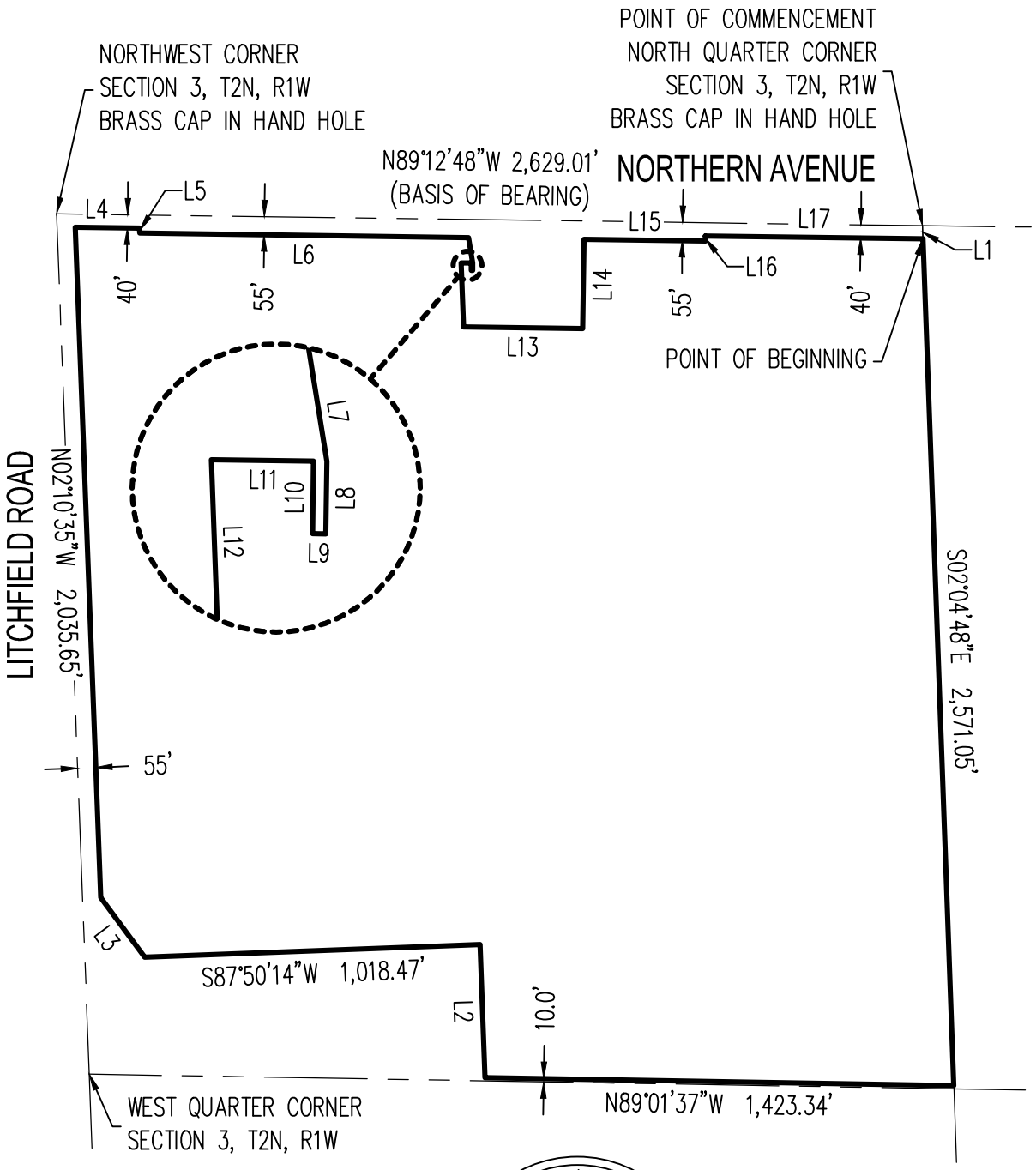
thence along the South line of the North 55.00 feet of said Northwest Quarter, South 89 degrees 12 minutes 48 seconds East, 368.98 feet;

thence North 2 degrees 04 minutes 48 seconds West, 15.02 feet;

thence along the South line of the North 40.00 feet of said Northwest Quarter, South 89 degrees 12 minutes 48 seconds East, 660.83 feet to the **POINT OF BEGINNING**.

Containing an area of 6,031,168 square feet or 138.4566 acres, more or less.





REGISTERED LAND SURVEYOR
CERTIFICATE NO.
37495
ROBERT A.
JOHNSTON
Date Signed 12/9/22
ARIZONA, U.S.A.

NORTH
N.T.S.

SHEET 1 OF 2

21-1329	Luke Field Property	EPS GROUP
	EXHIBIT	1130 N. Alma School Rd. Ste. 120 Mesa, AZ 85201 T:480.503.2250 | F:480.503.2258 www.epsgroupinc.com

Dec 09, 2022 5:09am S:\Projects\2021\21-1329\Land Survey\Legals\LXA - Exhibits - Legal\21-1329 - Luke Field Property - Legal.dwg

LINE TABLE		
LINE	BEARING	LENGTH
L1	S02°04'48"E	40.05'
L2	N02°09'46"W	403.98'
L3	N36°23'58"W	224.98'
L4	S89°12'48"E	195.26'
L5	S02°10'35"E	15.02'
L6	S89°12'48"E	998.36'
L7	S09°03'38"E	78.16'
L8	S00°49'37"W	22.00'
L9	N89°10'23"W	4.00'

LINE TABLE		
LINE	BEARING	LENGTH
L10	N00°49'37"E	22.00'
L11	N89°10'23"W	31.00'
L12	S02°07'23"E	194.26'
L13	S89°10'23"E	362.00'
L14	N00°49'37"E	271.25'
L15	S89°12'48"E	368.98'
L16	N02°04'48"W	15.02'
L17	S89°12'48"E	660.83'

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
37495
ROBERT A.
JOHNSTON
Date Signed 12/9/22
ARIZONA, U.S.A.

SHEET 2 OF 2

21-1329

Luke Field Property

EXHIBIT

EPS GROUP
1130 N. Alma School Rd.
Ste. 120 Mesa, AZ 85201
T:480.503.2250 | F:480.503.2258
www.epsgroupinc.com

Dec 09, 2022 5:09am S:\Projects\2021\21-1329\Land Survey\Legals\LXA - Exhibits - Legal\21-1329 - Luke Field Property - Legal.dwg

Exhibit 5A

Off-Site Wastewater Engineering Report

Final Engineering Report

For

Shared Infrastructure Improvements
Luke Field & Liberty Utilities

City of Glendale / Maricopa County, Arizona

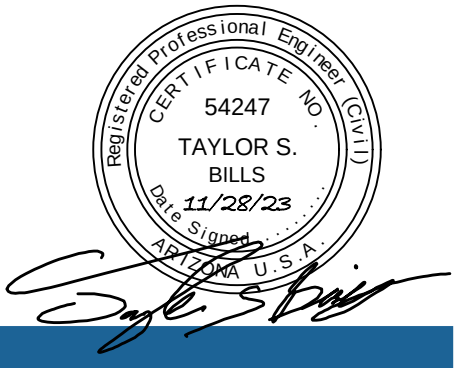
Owner/Developer(s):

Lincoln Property Company
Contact: Anthony Villarreal
3131 E. Camelback Road, Ste. 318
Phoenix, AZ 85016
Tel: 602-912-8888
Email: avillarreal@lpc.com

By signing this study, I am attesting that I have relied upon this document's certified engineer's calculations and presentation. I have not verified all of the presented calculations for errors or omissions. My review is to only acknowledge that this master plan report's logic and disclosure as to how this development impacts utility owned infrastructure appears acceptable per the information provided herein, and that it conforms to the intent of the Utility's Development Guide. If there are any changes to the representations within this master plan, the engineer will submit a revised master plan for review. Approval of the report does not imply approval of equipment, material, devices, or other appurtenances that may be referenced.

David Snow

12/06/2023



Project No. 22-0186

Date: November, 2023

1130 N. Alma School Rd, Ste 120
Mesa, AZ 85201
o: 480.503.2250
f: 480.503.2258

Table of Contents

Appendices

1.0 Executive Summary

Luke Field (The Project) consists of approximately 274-acres (gross) that will be provided sewer service by Liberty Utilities (Litchfield Park Water & Sewer) Corp. ("Liberty"). We acknowledge that we are accommodating NPCC as well in our calculations for the future.

The two developments that make up The Project will be developed independent of each other and are both anticipated to commence construction in the fourth quarter of 2023 and be fully built out in the fourth quarter of 2024.

All design criteria are in accordance with the requirements of Liberty as presented in Maricopa County Construction Guide dated January 2014.

Liberty has requested that The Project complete a system of infrastructure upgrades in addition to the installation of onsite improvements and an offsite force main in order to provide service to The Project and additional developments downstream.

The proposed system meets the master planning criteria as established by Liberty. The existing Liberty sewer collection system, after the required upgrades are completed, will have adequate capacity, and can be extended to provide sewer service to The Project. Upon the completion of the construction of a replacement sewer treatment facility, Liberty will have adequate sewer treatment to accommodate The Project.

2.0 Introduction

2.1 Objective

This engineering report will outline on-site and offsite sewer collection system requirements for The Project.

Northern Parkway Commerce Center consists of 135-acres (gross) is located west of Dysart Road between Northern Parkway and the Dysart Drain and will be annexed into the City of Glendale. Although NPCC is not associated with Luke Field, all sewer infrastructure for The Project have been sized to accommodate future flows from NPCC.

Luke Field consists of 139-acres (gross) is located east of Litchfield Road between Northern Avenue and the Dysart Drain and will remain in unincorporated Maricopa County.

Sewer service will be provided by Liberty Utilities (Litchfield Park Water & Sewer) Corp. ("Liberty"). Liberty will file an application with the Arizona Corporation Commission to extend its Certificate of Convenience and Necessity ("CC&N") to include the Project. This report is being prepared in support of the CC&N application and Main Extension Agreement ("MXA").

2.2 Project Location

The Project is generally located between Dysart Road on the east and Litchfield Road on the west and between Northern Parkway/Northern Avenue on the north and the Dysart Drain on the south in the northern half of Section 3, Township 2 North, Range 1 West of the Gila and Salt River Meridian in Maricopa County, Arizona.

The Project is bounded on the west and south by Luke Air Force Base ("Luke") and the Morton Salt Factory on the east. See Figure 2.1.

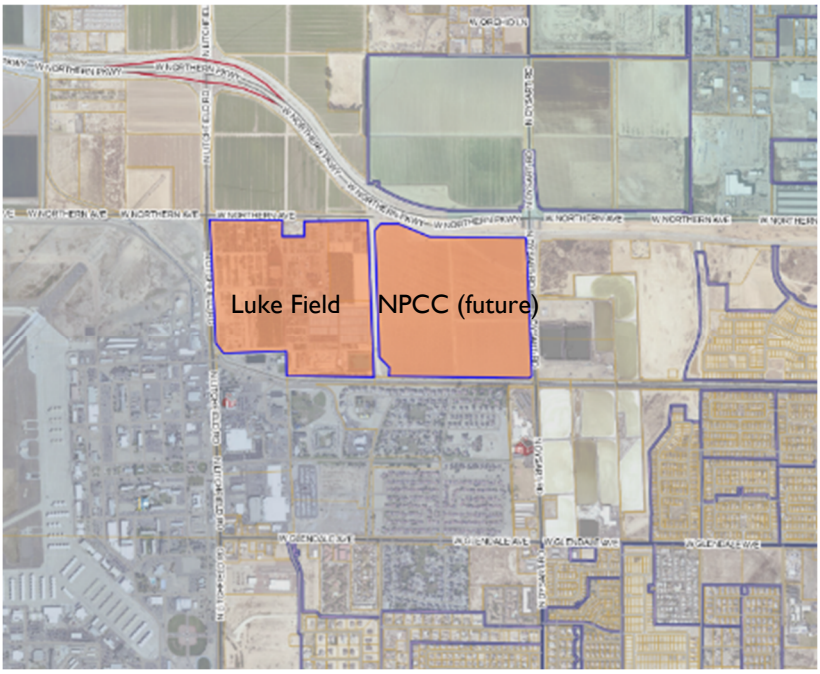


Figure 2.1 – Vicinity Map

2.3 Topographic Conditions

The Project ranges in elevation from approximately 1,082-feet at the northwest corner of the site to 1,080-feet at the southeast corner to 1078-feet at the southwest corner of the site. Historic drainage is generally from the north to the south in a southeasterly direction. This historic drainage has been cut-off by the Dysart Drain, which runs along the southern boundary of The Project.

2.4 Proposed Development

The Project is approximately 274-acres (including NPCC future build out) and currently zoned Industrial-2 & Airport District Two. The Project complies with all zoning regulations by both Maricopa County and Luke Field.

The two developments that make up The Project will be developed independent of each other with the sole exception of the water and sewer infrastructure. They are both anticipated to commence construction in the fourth quarter of 2023 and be fully built out in the fourth quarter of 2024.

3.0 Design Criteria

All design criteria are in accordance with the requirements of Liberty as presented in Maricopa County Construction Guide dated January 2014. The Liberty design criteria exceed minimum standards established by the Arizona Department of Environmental Quality ("ADEQ") for sewer systems. Liberty specifies the demand criteria as shown in Table 3.1.

Table 3.1 – Liberty Demand Criteria

Land Use	Population Dens. (capita/DU)	Demand (per day)			Peak Hour Peaking Factor
		Gal. Per Cap	Gal. per Unit	Unit	
Single Family	3.2	100	-	Home	3.0
Multi-Family	2.0	100	-	Home	3.0
Commercial	-	-	1,500	Acre	3.0
Industrial	-	-	1,500	Acre	3.0

Liberty establishes the additional sewer system criteria presented in Table 3.2

Table 3.2 – Additional Sewer System Criteria

Sewer Depth of Cover	7.5 ft. minimum for trunk-lines 5.0 ft. minimum for all other provided that service lines have 4.5 ft. minimum cover at the property line. (Based on site conditions and approval by Utility)
Rim Elevations	Above 100 year floodplain
Manning's Roughness Coefficient	n = 0.013
Sewer Pipe Material	Epoxy lined D.I.P. or concrete encased PVC SDR35 at wash crossings. PVC SDR 35 for all other.
Velocities	2.0 fps minimum at peak hour 2.0 fps minimum at average daily flow for trunk lines. 10.0 fps maximum
Cleanouts	At end of lines less than 200 ft.
Sewer Capacity Ratio	d/D = 0.75 maximum at peak hour
Minimum Pipe Diameter	8" or 12" along section lines, 6" for force mains
Minimum Manhole Diameter	5' with 30" ring and cover (no steps)
Force Main Velocities	3.0 fps minimum 7.0 fps maximum
Force Main Air Release Valves	Sized and located per manufacturer's recommendation at high points.
Wash Crossings	Epoxy lined DIP or Concrete encased PVC SDR 35 with the following cover: 2' below the 100-yr storm scour depth, 5' minimum below the wash bottom for minor wash crossings 4' below the 100-yr storm scour depth, 8' minimum below the wash bottom for major wash crossings
Manhole Invert Drops	
< 45° direction change	0.1' drop across manhole
> 45° direction change	0.2' drop across manhole
MH/LS (wet well) Sewer Lining	Shield 100, Sauereisen 210, Raven 405/A10, Con Shield, Q or T Loc, or approved equal applied by a certified applicator for: All force main connection manholes. All lift stations (wet wells) All manholes on sewer lines >_ 15" diameter and Sewer lines that have >_ 1.44 MGD flow

4.0 Sewer Flows

Table 4.1 represents the land use and resulting flows for The Project utilizing the master planning design criteria established by Liberty. Liberty Utilities Development guide's average demand per acre is 1500 gpad but 815 gpad will be used with approval from Liberty. The lower average demand was based on the water usage bills of an existing building in the immediate vicinity which has identical size and usage. Water usage bills and written approval from Liberty Utilities can be found in Appendix D.

All onsite sewer lines will be owned by Liberty Utilities and will be in a 20' sewer easement. Each proposed building will have a flow meter and sampling station that will monitor the sewer flows exiting the building.

Table 4.1 – Land Use and Sewer Flows

Flow Information		**Average Day Demand**		**Peak Day Demand**				
Description	Contributing Area (Acres)	Demand per Acre (GPD)	Average Day Demand	Peaking Factor[2]	Peak Day Demand (GPD)	Peak Day Demand (MGD)	Peak Day Demand (gpm)	Peak Day Demand (cfs)
Northern Parkway Commerce Center	135.0	815	110,025	3.00	330,075	0.330	229	0.51
Luke Field	139.0	815	113,285	3.00	339,855	0.340	236	0.53
Total:	274.0		223,310		669,930	0.670	465	1.04

5.0 Existing Facilities/Conditions

Liberty's existing service area consists of approximately 22 square miles located south of The Project and north of I-10. Liberty provides sewer collection and treatment service for all of the City of Litchfield Park and portions of Avondale, Buckeye, Glendale, Goodyear and unincorporated Maricopa County.

Liberty's existing sewer collection and treatment facilities include the Palm Valley Water Reclamation Facility ("PVWRF"), which was constructed and placed into service in February 2001. The current permitted capacity of the PVWRF is 5.1 MGD with the required Aquifer Protection Permit being issued by ADEQ on April 13, 2012. This facility is expandable to 8.0 MGD and was designed primarily to serve all residential and commercial development from Cotton Lane on the west to Dysart Road on the east and from McDowell Road on the south to the northern limit of Liberty's sewer service area. Liberty has indicated that the PVWRF is planned to exceed its permitted capacity and is awarded a design build contractor to construct Sarival Water Reclamation Facility (SWRF) that will have the capacity to accommodate this project.

SWRF will be in Goodyear, Arizona and will have the capacity to treat approximately 4 million gallons of wastewater per day. This water reclamation facility will utilize a membrane bio-reactor treatment process to meet all ADEQ requirements and regulations. Liberty has indicated that the replacement treatment plant will be operational prior to the anticipated occupancy of The Project.

Liberty owns and operates a trunk sewer line that extends from the PVWRF northerly through a series of gravity lines and force mains to the Casitas Bonitas Lift Station within the Capistrano North subdivision. According to Liberty, when the 8" force main exits the lift station, it will exceed its capacity when it connects to an 8" gravity sewer line. This force main is within the Casitas Bonitas subdivision and will require significant upgrades in order to accommodate this project.

6.0 Proposed Facilities

Due to physical constraints imposed by the Dysart Drain, a lift station and force main are required to pump sewer flows from The Project across the Dysart Drain and then south within Dysart Road to Rose Lane. The design flow for the lift station is anticipated to be 0.67 MGD or 465 gpm. Details about the lift station are in a separate report.

Due to the limited capacity of the Casitas Bonita's Lift Station & required pump upgrades to accommodate proposed flows, Lincoln Properties has elected to bypass the lift station and connect the 8" force main to a proposed 15" gravity sewer line south of Dysart and Rose Lane. This design is more cost effective than upgrading the pumps in the Casitas Bonita's Lift Station. A detailed analysis of all designs analyzed and associated costs can be found in the "Casitas Bonita's Lift Station Capacity Study Part 2" prepared in July 2023 by Carollo Engineers for Liberty Utilities. In addition, The Project includes the construction of an 8" force main exiting Casitas Bonita's, at Maryland Ave, which will terminate at a proposed manhole south of Rose Lane. Therefore, from Maryland Ave to Rose Lane, there will be two joint trench - 8" force mains flowing south on Dysart Road.

From Rose Lane south, Liberty has requested that The Project construct a 15" gravity sewer line which will flow into at an existing 15" gravity line and manhole located at the intersection of Dysart & Missouri. From here, wastewater will flow south, eventually ending at the PVWRF.

The construction of the sewer improvements will take place in three phases running south to north. Phase 1 will be the construction of a 15" gravity sewer line flowing south in Dysart Road from Missouri Ave to Rose Lane. Phase 2 will construct dual 8" force mains from Rose Lane to Maryland Ave to. Phase 3 will include one 8" force main starting at Maryland Ave, runs north and crosses the Dysart Drain, then west and ends at the onsite lift station. Please refer to Appendix A for a map of the proposed infrastructure and Appendix B for engineering calculations.

The Casitas Bonitas Lift Station has two pumps that provide a total pumping capacity of 700 gpm and a firm pumping capacity of 350 gpm, as verified by pump runtime logs. The 8-inch force main leaving the lift station is large enough to convey the flow from the lift station.

7.0 Conclusions

- The proposed improvements will be constructed in three phases
- The proposed system meets the sewer master planning criteria as established by Liberty and ADEQ.
- Sewer treatment requirements will be met from the existing PVWRF or its replacement facility.

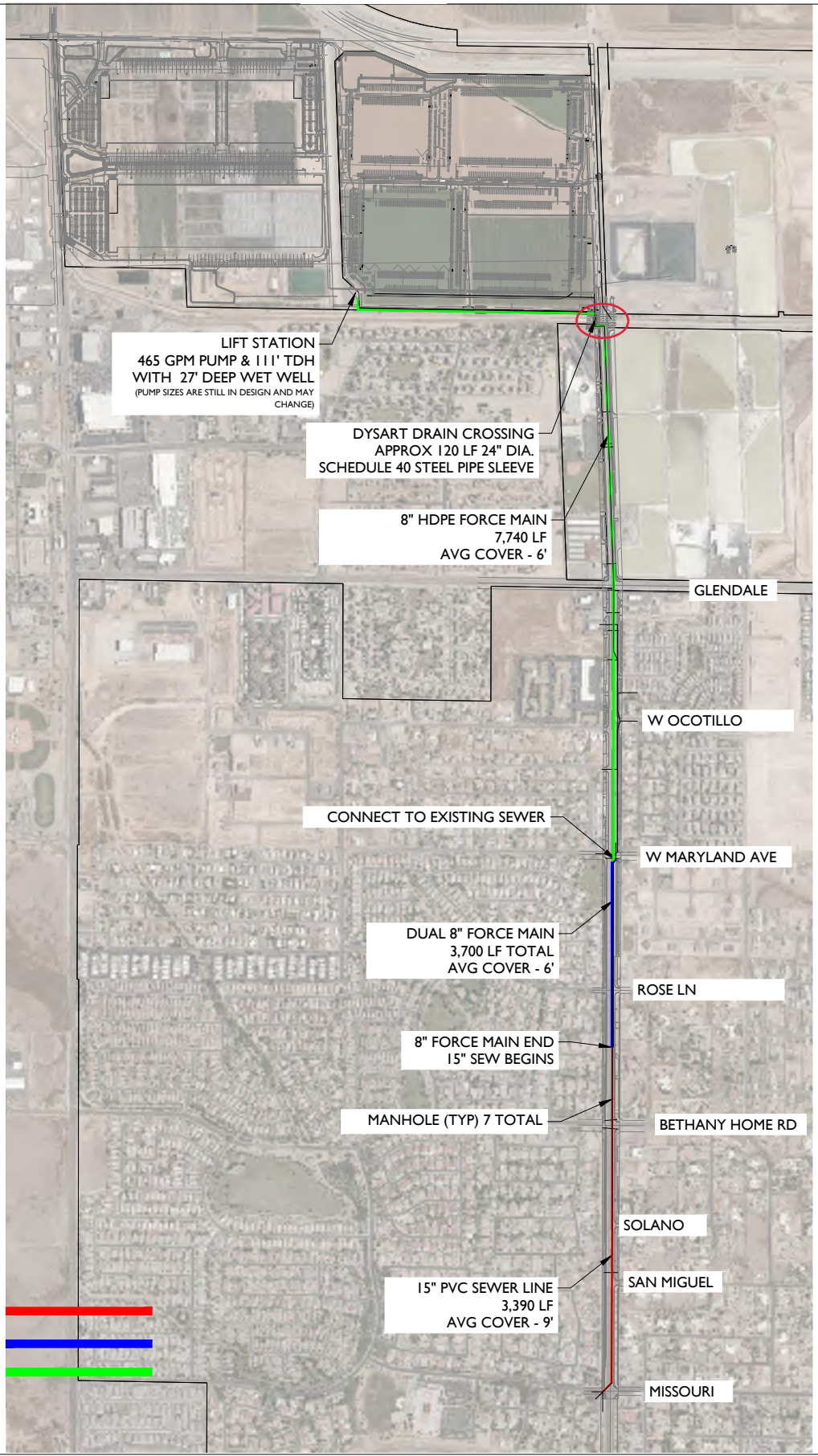
8.0 References

Liberty Utilities Development Guide. (2014, January 1). Maricopa County.

Richard A. Humpherys, P. E. (2023). *Casitas Bonitas Lift Station Capacity Study Part 2.* Liberty Utilities.

Appendix A: Sewer Exhibit

Exhibit B



LEGEND

PHASE 1

PHASE 2

PHASE 3

SCALE: 1"=1500'

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22-0186

Offsite Sewer Exhibit

Luke Field

EPS GROUP
1130 N. Alma School Rd
Suite 120 Mesa, AZ 85201
T:480.503.2250 | F:480.503.2258
www.epsgroupinc.com

Appendix B: Sewer Calculations

Average Daily Sewer Flows and Pipe Capacity Using Manning's Equation

Project: Shared Infrastructure Improvement

Prepared by: Jackie Hollmer **Date:** 12/5/2023

Calculations Assume 815 GPD/acre

Sewer Pipe Information					Additional Flow Information					Peak Demand Information					Full Flow Check		Non-Pressurized Flow Calculations					
Sewer Reach	Length (ft)	Pipe Diameter (in)	Slope (ft/ft)	Manning's Roughness	Description	Size	Average Unit Daily Flow	Additional Upstream Flow (GPD)	Additional Estimated Daily Flow (GPD)	Cumulative Daily Flow (GPD)	Peaking Factor	Peak Demand (GPD)	Peak Demand (MGD)	Peak Demand (cfs)	Full Flow Capacity (cfs)	Pressurized Flow?	Theta of flow (rad)	Depth of Flow (ft)	Percent Full (d/D)	Area of Flow (ft2)	Wetted Perimeter of flow (ft)	Velocity of Flow (fps)
Flows From Luke Field																						
		8			Luke Field Onsite (Phase 3 flows - 8" forcemain)	139.0 ac	815 gpad		113,285	113,285	3.00	339,855	0.340	0.526									
Flows From Lift Station																						
		8			Lift station to MH3 (Phase 2 flows - 8" forcemain)		256,320 gpd		256,320	256,320	3.00	768,960	0.769	1.190									
All flows																						
MH3-MH4	500	15	0.0178	0.013	Flows From Castias Bonitas Lift Station & Project Site				0	369,605	3.00	1,108,815	1.109	1.716	8.64	NO	2.33	0.38	30%	0.3127	1.455	5.49
MH4-MH5	500	15	0.0271	0.013					0	369,605	3.00	1,108,815	1.109	1.716	10.66	NO	2.19	0.34	27%	0.2691	1.369	6.38
MH5-MH6	460	15	0.0109	0.013					0	369,605	3.00	1,108,815	1.109	1.716	6.76	NO	2.50	0.43	34%	0.3730	1.565	4.60
MH6-MH7	500	15	0.0113	0.013					0	369,605	3.00	1,108,815	1.109	1.716	6.89	NO	2.49	0.43	34%	0.3682	1.557	4.66
MH7-MH8	500	15	0.0110	0.013					0	369,605	3.00	1,108,815	1.109	1.716	6.79	NO	2.50	0.43	34%	0.3718	1.563	4.61
MH8-MH9	500	15	0.0060	0.013					0	369,605	3.00	1,108,815	1.109	1.716	5.02	NO	2.75	0.50	40%	0.4633	1.720	3.70
MH9-MH10	303	15	0.0084	0.013					0	369,605	3.00	1,108,815	1.109	1.716	5.94	NO	2.61	0.46	37%	0.4099	1.630	4.19
MH10-MH11	119	15	0.0312	0.013					0	369,605	3.00	1,108,815	1.109	1.716	11.44	NO	2.15	0.33	26%	0.2559	1.343	6.70

Notes: See Luke Field Lift Station Sewer Report for capacity calcs of the 8" forcemain

Appendix C: Casitas Bonitas Lift Station Capacity Analysis Study

PROJECT MEMORANDUM - DRAFT

CASITAS BONITAS LIFT STATION CAPACITY STUDY PART 2

Date: July 21, 2023

Project No.: 201871

Liberty Utilities, Inc.

Prepared By:	Richard Humpherys, P.E.
Subject:	Casitas Bonitas Lift Station Sewer Capacity Analysis Study to Serve Additional Developments

Introduction and Study Purpose

Liberty Utilities, Inc. (Liberty) owns and operates the Casitas Bonitas Lift Station, which pumps sewage from several developments near the lift station to a gravity main in Maryland Avenue west of Dysart Road. Liberty wants to determine if several additional proposed developments could send wastewater flow to this lift station, then determine the infrastructure improvements that would be needed to convey these additional flows.

Completing this study consists of completing the following major tasks:

- Quantify the wastewater flows that are planned from additional developments.
- Add additional gravity sewers and a lift station with a force main from two developments needed to convey the additional flows.
- Determine alternatives to deliver the additional wastewater flows through the Liberty collection system.
- Determine the additional capacity required for additional flows to the Casitas Bonitas Lift Station with the force main discharging to a new gravity sewer along Dysart Road.
- Analyze infrastructure updates needed to deliver additional wastewater flows.
- Determine the gravity sewer diameter needed along Dysart Road for additional flows from the Casitas Bonitas and Northern Parkway lift stations. Prepare Class 5 level capital improvement costs of the required additional infrastructure.

The following documents were provided by Liberty for use in this evaluation:

- Northern Parkway Commerce Center and Luke Field Final Engineering Report Sewer Master Plan, January 2023.
- Engineering Report for Park at Palm Valley Apartments, August 2021.
- Final Wastewater Report for Artisan Communities, March 6, 2020.
- Operations & Maintenance Manual – Litchfield Park Service Company Casitas Bonitas Lift Station, January 2004.

This project memorandum summarizes the results of this evaluation.

Study Area

Figure 1 presents the current and proposed developments for the Casitas Bonitas Lift Station. The Capistrano North, Capistrano South, Commercial No. 1, Commercial No. 2, Falcon Ridge, and Casitas Bonitas developments are currently served by the Casitas Bonitas Lift Station. The Skyline Ranch and Palm Valley Apartment developments will be added and will be served by the Casitas Bonitas Lift Station. The Luke Field and Northern Parkway Commerce Center wastewater flows will be delivered to a lift station at the southeast corner of the Northern Parkway Commerce Center, referred to as the Northern Parkway lift station. An 8-inch force main will deliver wastewater from the lift station and connect either to the Casitas Bonitas Lift Station or a gravity sewer in Dysart Road.

Performance Criteria

This section describes the "standards of measurement" that were used to evaluate the performance of the wastewater system in this study. The 2018 Integrated Water and Sewer Master Plan (2018 IWSMP) performance criteria were used in this analysis. These criteria are based on the Arizona Administrative Code and Liberty's design standards. The performance criteria are used to determine the acceptability of proposed developments and infrastructure. The wastewater system performance criteria that apply to this study include:

- Lift station pumps are sized to have no more than seven starts per hour.
- The minimum water velocity for peak hour flows in gravity sewers is 2 feet per second and the maximum velocity for peak hour flows is 10 feet per second.
- The maximum flow depth to pipe diameter (d/D) ratio for peak hour flows is 0.75 for new pipes.
- Existing pipes may have a d/D up to 0.9 before upsizing is required. This criterion for pipes will allow full use of the sewer capacities to avoid premature pipe replacement.
- Pipes have minimum slopes to maintain self-cleaning velocities (2 feet per second) while flowing half full as presented in Table 1. Due to the hydraulics of a circular conduit, velocity for half-full flow in pipes approaches the velocity of a nearly full pipe.
- Peak flows are estimated based on the Liberty's development guide, using a factor of three. Actual flows may not have a peaking factor this high.

Table 1 Recommended Minimum Slopes for Circular Pipes

Pipe Size (inches)	Minimum Slope (feet per foot)	Pipe Capacity	
		(mgd)	(gpm)
8	0.0034	0.45	300
10	0.0025	0.7	500
12	0.0020	1.02	700
15	0.0015	1.59	1,100

Notes:
(1) Mannings "n" = 0.013 used for estimating pipe friction losses.
(2) Pipe capacity is based on full pipe flow.
Abbreviations:
mgd = million gallons per day; gpm = gallons per minute

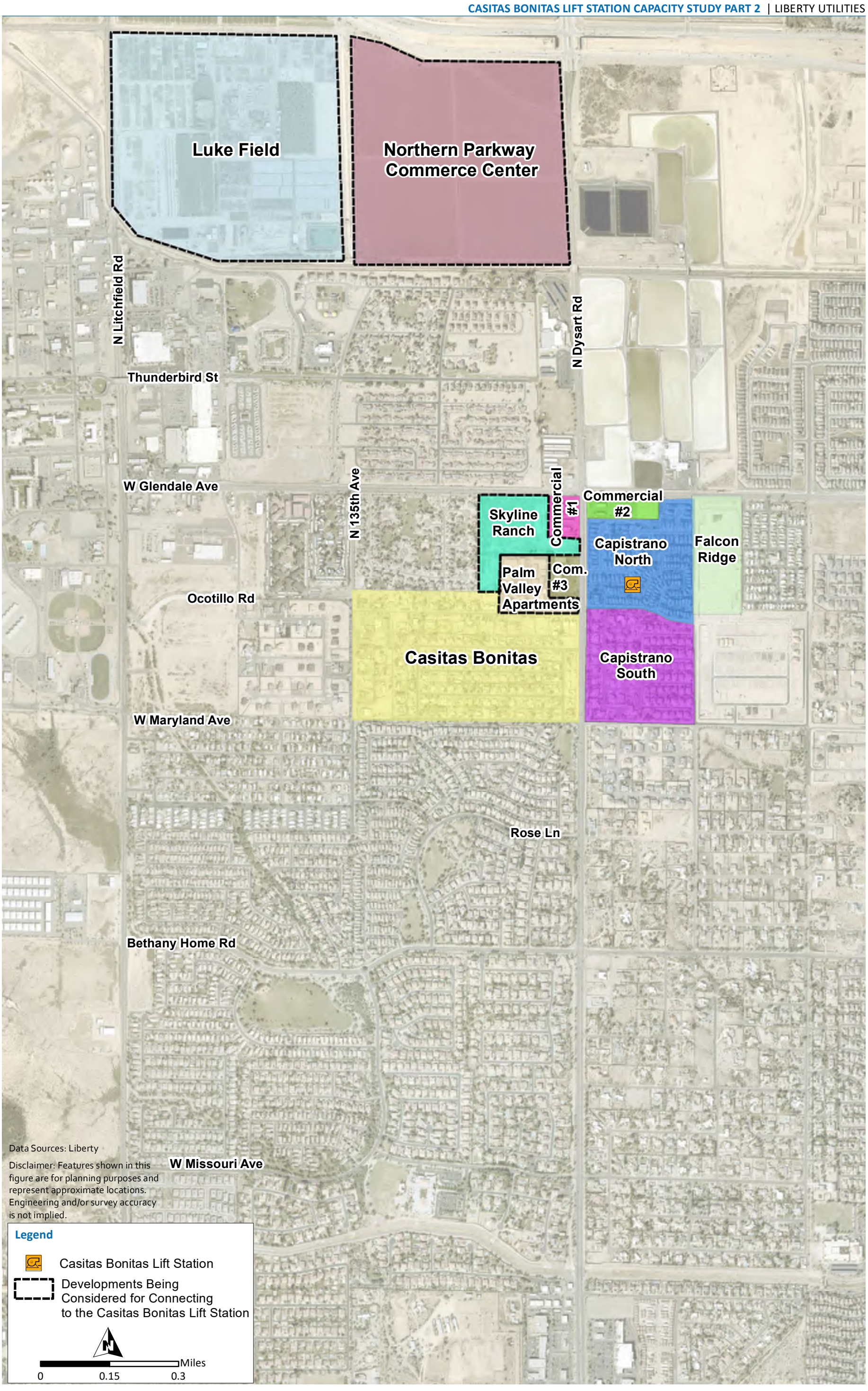

Figure 1 Land Areas and Developments Potentially Served by the Casitas Bonitas Lift Station

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Wastewater Flow Estimates

The existing and proposed developments that could potentially be served by the Casitas Bonitas Lift Station were evaluated by first estimating the flows that would be generated from each development when fully built out. Figure 1 presents the developments that are connected to the Casitas Bonitas Lift Station and those that are considered for connection in this study.

Wastewater flows were estimated using Liberty's design criteria, as documented in the 2018 IWSMP. For each development, an average daily flow and a peak flow in gpm was calculated based on a per capita wastewater flow of 100 gallons per capita per day (gpcd) for residential development. The population per single family housing unit was assumed to be 3.2, and the population per multi-family housing unit was assumed to be 2.0. Commercial wastewater flows are estimated to be 1,500 gpad. Table 2 summarizes the projected average daily and peak hour flows from each development. The average daily flow through the Casitas Bonitas Lift Station is 69 gpm based on the run-time logs, which is approximately half of the design flows.

Developments in Table 2 are grouped by whether or not the development is currently served by the Casitas Bonitas Lift Station.

Table 2 Current and Proposed Wastewater Flows into the Casitas Bonitas Lift Station

Development	Dwelling Units (DU) or Acres (ac)	Population	Unit Wastewater Flow (gpcd or gpad)	Average Daily Flow (gpm)	Peak Hour Flow (gpm)
Developments Currently Served by the Casitas Bonitas Lift Station					
Capistrano North	183 DU	586	100 gpcd	41	122
Capistrano South	80 DU	256		18	53
Casitas Bonitas	159 DU	509		35	106
Falcon Ridge	21 DU	67		5	14
Commercial No. 1	3.9 ac	-	1,500 gpad	4	12
Commercial No. 2	4.8 ac	-		5	15
Commercial No. 3	5.4 ac	-		6	17
			Total	**113**	**339**
Developments that Could be Served by the Casitas Bonitas Lift Station					
Northern Parkway Commerce Center	135 ac	-	815 gpad	76	229
Luke Field	139 ac	-		79	236
Park at Palm Valley Apartment	300 DU	600	100 gpcd	42	125
Skyline Ranch (Formerly Artisan)	167 DU	334		23	70
			Total	**220**	**660**

Wastewater System Capacity Evaluation

Development Connections

The connection point for additional developments is the 8-inch force main in Dysart Road connected to the proposed Northern Parkway lift station. The feasibility of connecting each development is provided below.

- The Luke Field and Northern Parkway Commerce Center will be served by the proposed Northern Parkway lift station and an 8-inch force main that connects to the Casitas Bonitas Lift Station. Alternatively, the Northern Parkway lift station can deliver wastewater flows directly to a new 15-inch gravity sewer in Dysart Road that begins at Bethany Home Road.
- Ground elevations of Park at Palm Valley Apartment are approximately 1080 feet (based on Google Earth). This development can be served by connecting an 8-inch sewer line that delivers flows to the Casitas Bonitas Lift Station.
- Skyline Ranch, formerly known as Artisan, will be served by a small private lift station that delivers water to an 8-inch gravity sewer in Dysart Road that delivers wastewater to the Casitas Bonitas Lift Station.

Casitas Bonitas Lift Station, Force Main, and Gravity Sewer Capacity Evaluation

The Liberty wastewater collection system model updated in the 2018 IWSMP was used in this evaluation. The hydraulic model was updated to include pipes and flows for the proposed developments listed in Table 2.

The Casitas Bonitas Lift Station has two pumps that provide a total pumping capacity of 700 gpm and a firm pumping capacity of 350 gpm, as verified by pump runtime logs. The 8-inch force main leaving the lift station is large enough to convey the flow from the lift station, but the force main needs to connect to a new gravity sewer in Dysart Road instead of the current location in the Cul-de-sac at North Sierra Hermosa Court South of West Maryland Avenue because the gravity sewer is at capacity downstream of the force main. Three locations were evaluated to determine an appropriate transition from force mains to gravity sewer. These locations are Rose Lane, Bethany Home Road, and Missouri Avenue. Figure 2 shows a distance graph of the pipe d/D in the gravity sewer downstream of the current discharge point for the Casitas Bonitas force main if the force main discharges at Missouri Avenue. The graph shows that the gravity sewer is surcharged when the lift station is operating. Increased flows to the lift station would lead to longer times of surcharging in this gravity sewer, which is located in a residential area.

To provide adequate capacity, the Casitas Bonitas Lift Station force main must be connected into the proposed 15-inch gravity main that runs south along Dysart Road beginning at Rose Lane. This proposed gravity main would start at Rose Lane and run south on Dysart Road to Missouri Avenue, where it would connect to the existing 15-inch gravity sewer that will convey wastewater down to the Palm Valley Water Reclamation Plant (PVWRP). The Casitas Bonitas force main must be connected to the gravity sewer in Dysart Road before any additional flows are pumped through the Casitas Bonitas Lift Station.

Alternative 1

Figure 3 presents a layout of the wastewater system including proposed infrastructure that was evaluated in Alternative 1. The new Northern Parkway lift station will convey the wastewater flows from the Northern Parkway Commerce Center and Luke Field developments. This new lift station has a design capacity of 475 gpm, a wet well diameter of 8 feet, and an elevation range of three ft. between the on and off setpoints of the pumps in the wet well. The lift station will deliver flows through an 8-inch force main to a 15-inch gravity sewer in Dysart Road that delivers wastewater into the Casitas Bonitas Lift Station. In Alternative 1, the Casitas Bonitas force main delivers to a gravity sewer that begins at Rose Lane and Dysart Road.

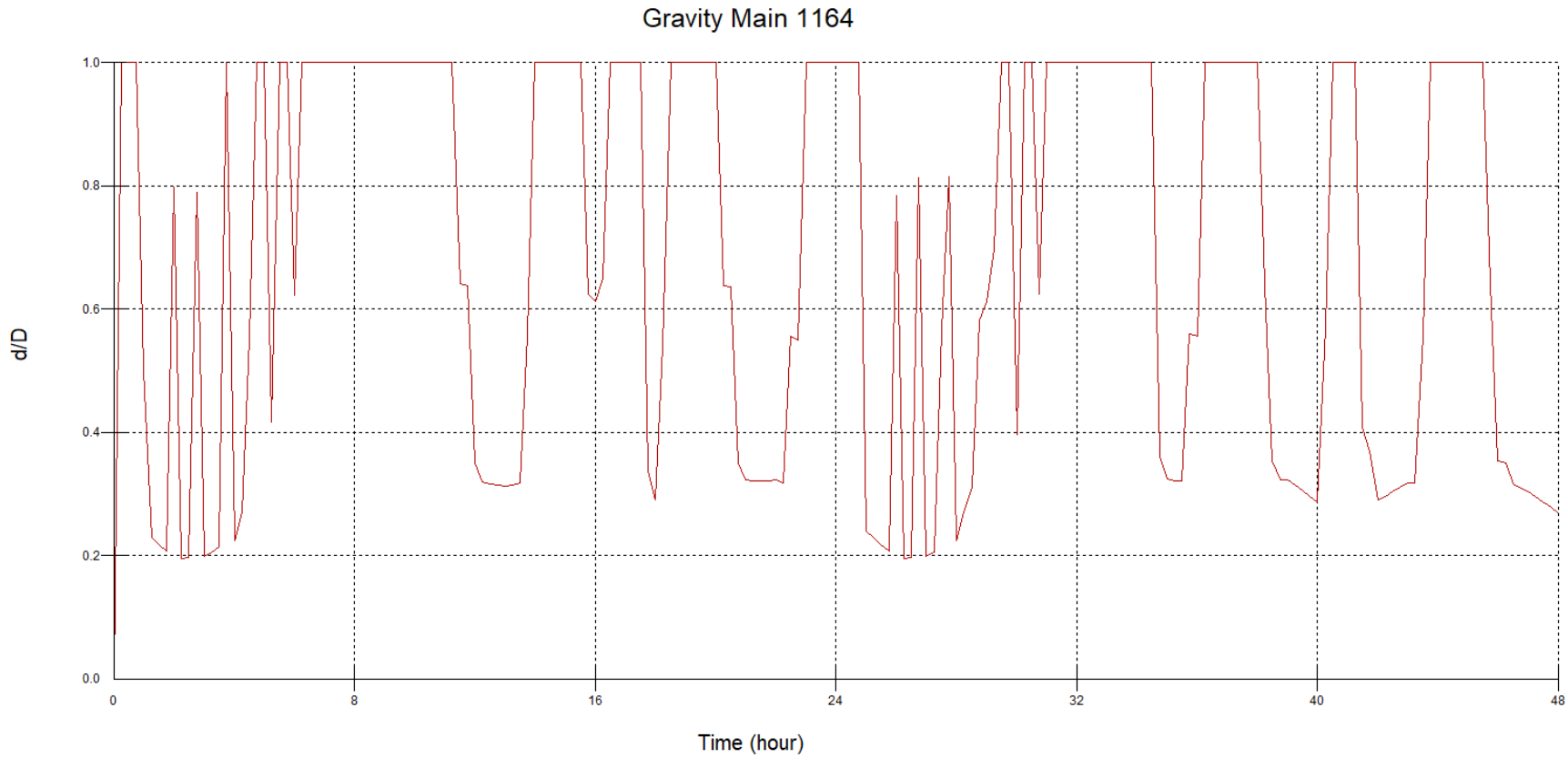

Figure 2 Surcharged Gravity Sewer Downstream from the Casitas Bonitas Force Main

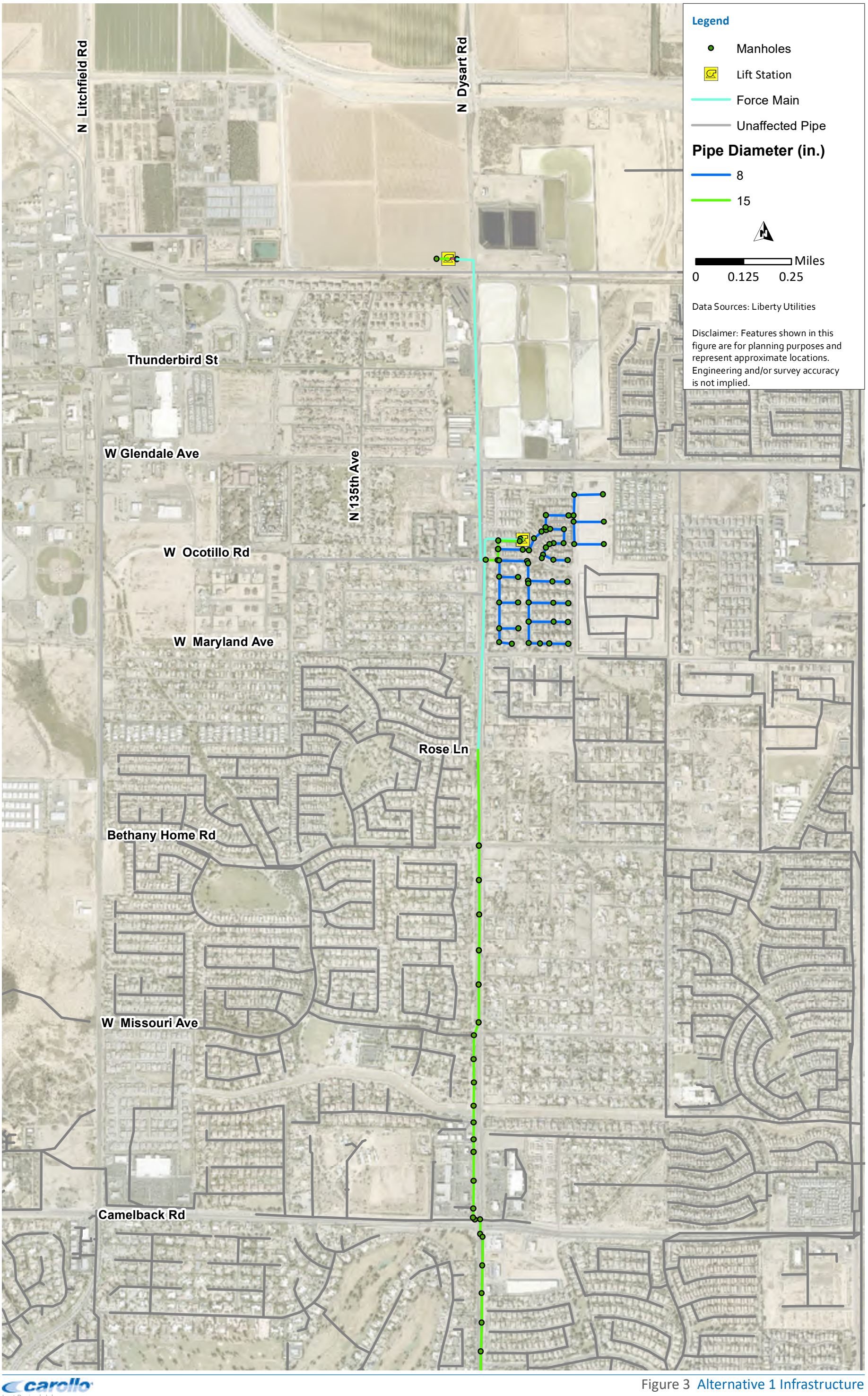

Figure 3 Alternative 1 Infrastructure

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The model was used to evaluate the collection system capacity with buildout flows. The Casitas Bonitas Lift Station pumps were initially evaluated at flow rates up to 850 gpm with the existing wet well to determine the lift station size that would be needed to pump the higher flows. The model predicted that a number of gravity sewer pipe segments between Missouri Road and the Palm Valley Water Reclamation Facility (WRF) were predicted to be out of capacity at peak hour flows. Therefore, an alternate approach was taken to increase the wet well capacity and then determine a lower pumping flow rate that would avoid the need to upsize existing gravity sewers enroute to the treatment plant.

The wet well diameter was increased to provide more storage, then the existing pump capacity was increased, while requiring only one of the two pumps in the Casitas Bonitas Lift Station to operate during peak flows. A pump station firm capacity of 600 gpm with a total dynamic head of 73 feet with a new wet well diameter of 12 feet provided the pump and wet well combination that avoided the need to increase the capacity of any downstream pipe. For this evaluation, the Casitas Bonitas Pump No. 1 was operating with a pump start wastewater elevation of 6 feet and a pump stop wastewater elevation of 2.5 feet. The lag pump has a start wastewater elevation of 7.6 feet and a stop elevation of 2.5 feet. This larger pump capacity and wet well size is set to avoid surcharging in downstream pipes.

The Casitas Bonitas Lift Station has a buried storage tank that can serve as an overflow to the wet well if necessary. This storage tank was not needed in this evaluation, and the lag pump also did not need to turn on during this evaluation.

The Casitas Bonitas Lift Station will require significant improvements to manage the higher flows. A new wet well, new pumps, and piping will also require a new electrical system and controls so the lift station will essentially need to be replaced.

Figure 4 presents the proposed infrastructure with pipes color coded by d/D, demonstrating that the gravity sewers have adequate capacity as measured by the pipe d/D. Although not on the map, the gravity sewers south of Camelback Road down to the PVWRP also have adequate capacity.

Alternative 2

Figure 5 presents a layout of the wastewater system including proposed infrastructure that was evaluated in Alternatives 2 and 3. The new Northern Parkway lift station will convey wastewater flows from the Northern Parkway Commerce Center and Luke Field developments through an 8-inch force main to a gravity sewer in Dysart Road and Rose Lane, where the force mains from both the Casitas Bonitas and Northern Parkway lift stations deliver to the gravity system. This alternative does not include the wastewater flows from Palm Valley Apartments. The effect of including or not including the Palm Valley apartments is that the run time of the Casitas Bonitas lift station will be a little longer, but there is no change in infrastructure with or without the Palm Valley Apartments.

The model was used to evaluate the collection system capacity with buildout flows. The model predicted that peak flows in three gravity sewer pipe segments reach a d/D of 0.8 when both lift stations are pumping at the same time. Therefore, the model predicts that the gravity sewer capacity is adequate but these pipes with a flatter slope do not have much unused capacity. Figure 6 presents the maximum pipe d/D for Alternative 2. Delivering flows from the Northern Parkway lift station directly to the gravity sewer in Dysart Road avoids the need to modify the Casitas Bonitas Lift Station.

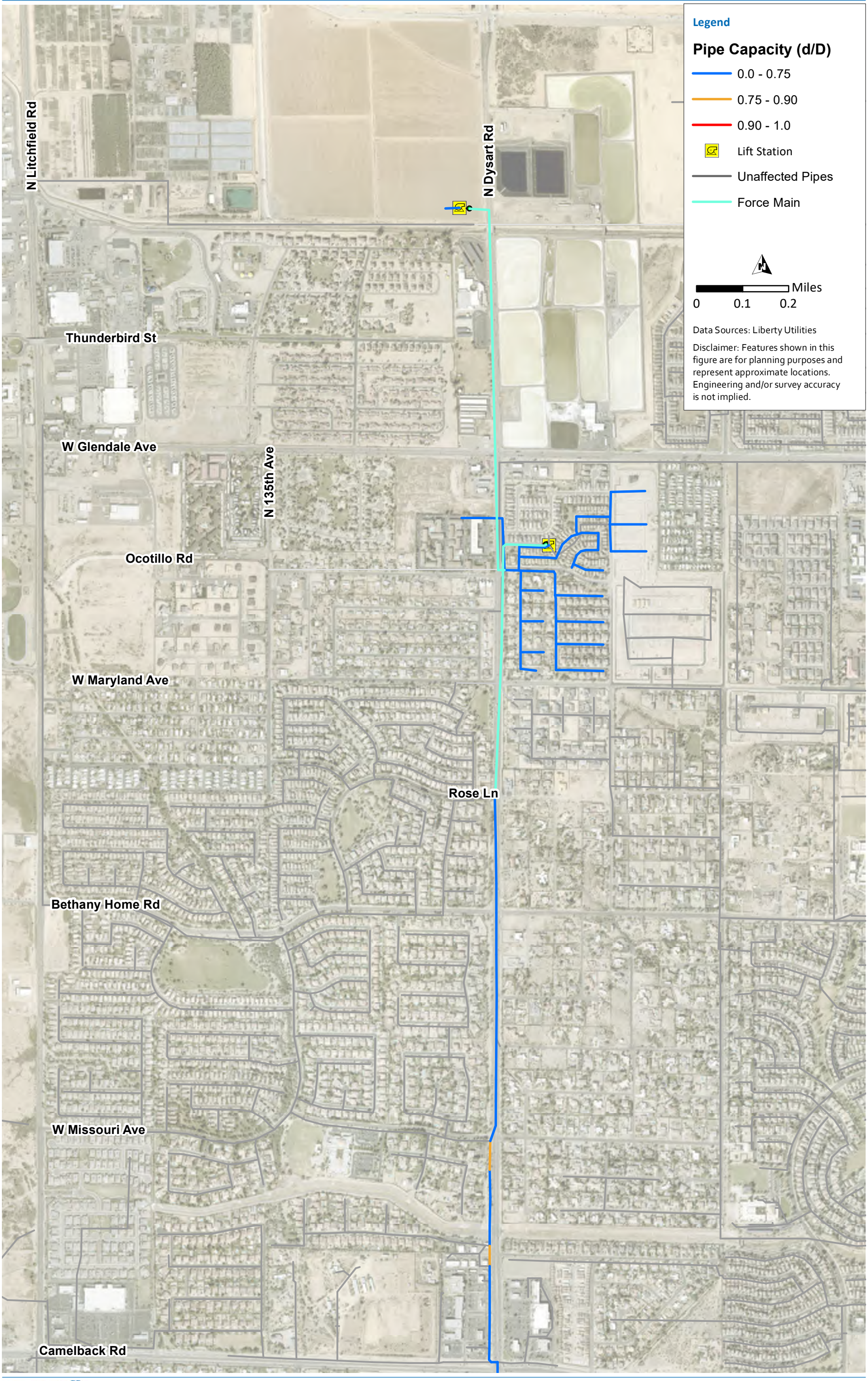

Figure 4 Alternative 1 Pipe Capacity

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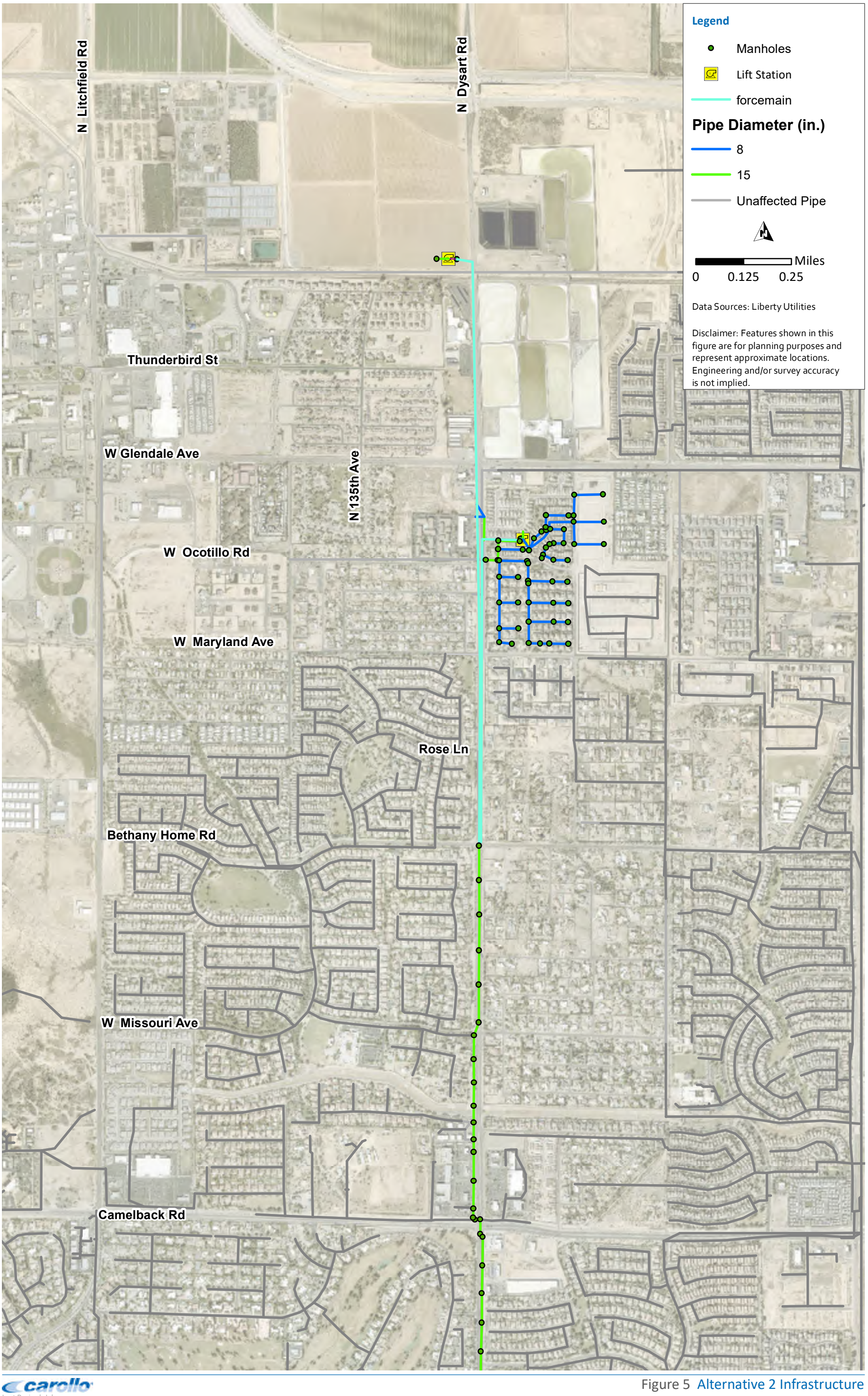

Figure 5 Alternative 2 Infrastructure

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Figure 6 Alternative 2 Pipe Capacity

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Document Path: C:\Users\mgaona\OneDrive - Carollo Engineers\Documents\Casas Bonitas\6.16.2023 Task\Figure Shapefiles\With Palm Valley\Liberty_dD_NoPalm.mxd

Another option considered was extending the Casitas Bonitas force main to Missouri Avenue to avoid having to construct a gravity sewer, and the force mains from both lift stations would extend to Missouri Avenue. However, the high point along Dysart Road is at Rose Lane, and the invert elevation of the gravity sewer at Dysart Road and Missouri Avenue has a lower elevation. The graph in Figure 7 presents the outcome of this analysis. Without an air release valve at Rose Lane, the hydraulic grade line goes below the invert elevation line, resulting in a negative pressure head at Rose Lane of approximately 18 feet. With an air valve at Rose Lane, wastewater would be pressurized to Rose Lane and the force main would have gravity flow downstream from Rose Lane. This has the potential to increase H2S levels in the force main and lead to odors and potential hydrogen sulfide corrosion. The force main would also drain when pumps are off. For these reasons, the discharge point at Rose lane was selected as the location to discharge the force mains.

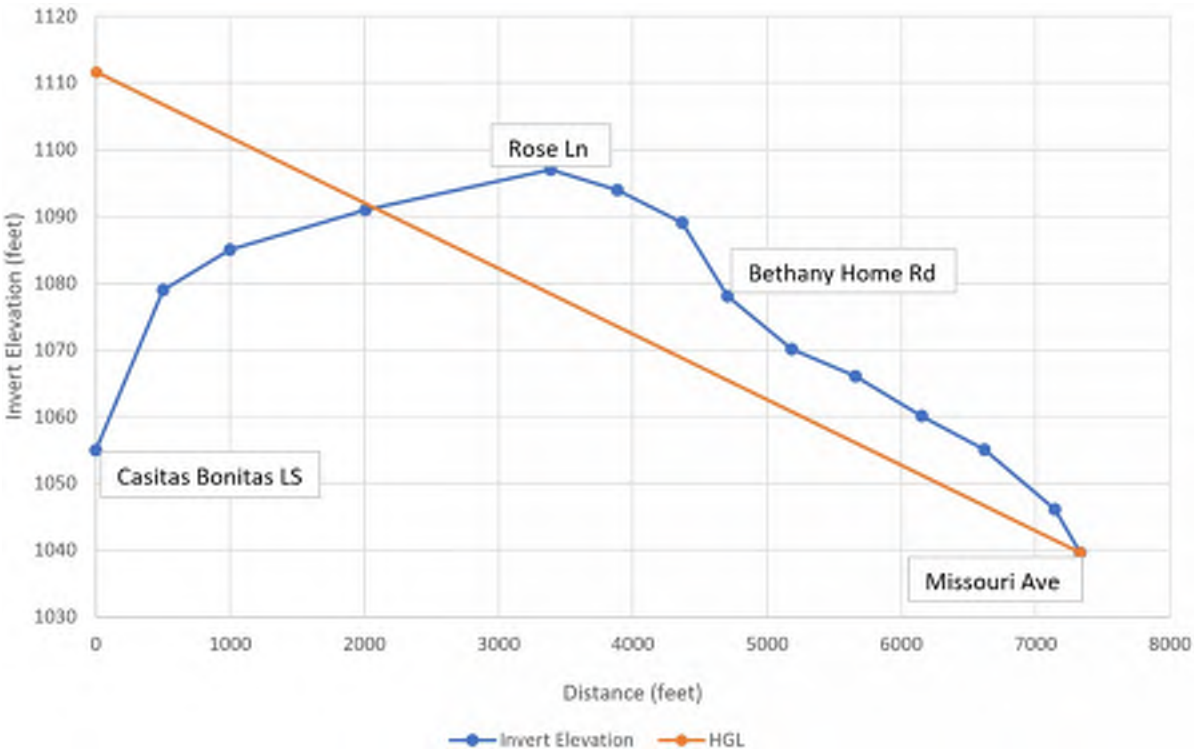

Figure 7 Pipe Elevation and Hydraulic Gradeline from the Casitas Bonitas Lift Station to Missouri Avenue and Dysart Road

Capital Improvement Costs

Utilities are currently experiencing a difficult bidding environment that may result in higher costs. The costs presented herein have an adjustment to account for the higher costs.

This study includes Class V capital costs for infrastructure needed to convey additional wastewater flows. Cost estimates were prepared in accordance with the guidelines of the Association for the Advancement of Cost Engineering (AACE) International. Table 3 summarizes the AACE International cost estimate classification system, the level of project definition (percent of design), uses, cost estimating methodologies, and expected accuracy of Class 1 through 5 estimates. The level of accuracy for the costs presented in this study corresponds to a Class 5 estimate. This level of cost estimating is appropriate for conceptual screening. Cost opinions at this level are generally considered to have an accuracy range of -50 to +100 percent.

Table 3 Cost Estimate Accuracy Provided by AACE International

Estimate Class	Maturity Level of Project Definition Deliverables - (Level of Engineering Design)	End Use	Typical Cost Estimating Methodology Used	Expected Accuracy Range (Low/High)
Class 5	0% to 2%	Conceptual screening	Capacity factored, parametric models, judgment, or analogy	L: -20% to -50% H: +30% to +100%
Class 4	1% to 15%	Study or feasibility	Equipment factored or parametric models	L: -15% to -30% H: +20% to +50%
Class 3	10% to 40%	Budget authorization or control	Semi-detailed unit costs with assembly level line items	L: -10% to -20% H: +10% to +30%
Class 2	30% to 75%	Control or bid/tender	Detailed unit cost with forced detailed take-off	L: -5% to -10% H: +5% to +20%
Class 1	65% to 100%	Check estimate or bid/tender	Detailed unit cost with detailed take-off	L: -3% to -10% H: +3% to +15%

Escalation Warning – In early 2020, the construction community and vendor network that supports the water/wastewater industry experienced significant disruptions due to COVID-19 restrictions adding new and significant complexity to their operations, labor force management, and material supply chain. This has created a bidding environment that has been and remains very difficult to predict. Throughout the second half of 2020 and all of 2021, 2022, and 2023, there have been extraordinary cost increases in key materials commonly required by treatment plant and pipeline projects and increased pressures on attracting and retaining quality craft labor. Additionally, increasing fuel costs and massive congestion at the nation's ports and rail yards, combined with near-record-low warehouse and trucking capacity, have raised shipping prices to levels that far exceed historical norms. It is clear by reviewing bid results for projects procured during this period that prices have increased at a rate that far exceeds long-term escalation trends. In addition, the variability between bidders has increased, making the pricing process more difficult to predict.

The construction outlook for the foreseeable future retains many of the same concerns as the previous years, while also incorporating new ones. Even though the primary risks regarding the health and safety of the population due to the threat of COVID-19 and its variants appear to be diminishing, and the corresponding restrictions on businesses are slowly being lifted, many of the challenges created by these past actions remain unresolved. Political events, economic policies, global trade disruptions, supply chain delays, fierce competition for labor, consumer inflation, rising fuel prices, and war have all created uncertainties that have impacted contractor pricing.

Consumers of construction cost estimate data should be advised that pricing accuracy is time sensitive and will degrade over relatively brief periods of time. Prices should be updated regularly to increase overall reliability.

The planning level capital costs for Alternative 1, which is to improve the Casitas Bonitas Lift Station, downstream force main, and gravity sewers to Missouri Avenue are presented in Table 4. Although not included in the costs, the Northern Parkway force main length is approximately 4,400 ft.

Table 4 Capital Cost of Alternative 1

Item Description	Diameter	Length (feet) or Flow Rate (gpm)	Number	Unit Cost ($)	Construction Cost ($)	Project Cost ($)
Casitas Bonitas Lift Station with SCADA Improvements	-	850	1	931,000	931,000	1,304,000
Casitas Bonitas Force Main Extension along Dysart Road Maryland Avenue to Rose Lane	8	1,344	1	186	250,000	350,000
Gravity Sewer with Manholes along Dysart Road from Rose Lane to Missouri Avenue	15	4,000	-	378	1,512,000	2,117,000
					Total	**$3,771,000**
					Total with 30% Market Contingency	**$4,902,000**

The planning level capital costs for Alternative 2 are represented in Table 5. The Northern Parkway force main has a length of approximately 6,800 ft. for this alternative.

Table 5 Capital Cost of Alternative 2

Item Description	Diameter	Length (feet) or Flow Rate (gpm)	Number	Unit Cost ($)	Construction Cost ($)	Project Cost ($)
Casitas Bonitas Force Main Extension along Dysart Road from Maryland Avenue to Rose Lane	8	2,660	1	186	495,000	693,000
SCADA Improvements for the Casitas Bonitas Lift Station			1	50,000	50,000	70,000
Gravity Sewer with Manholes along Dysart Rd. from Rose Land to Missouri Avenue	15	2,600	-	378	983,000	1,376,000
					Total	**$2,139,000**
					Total with 30% Market Contingency	**$2,781,000**

Conclusions and Recommendations

1. Alternative 2 is recommended over Alternative 1 because it is less expensive than Alternative 1 and avoids the need to replace the Casitas Bonitas lift station.
2. The force main downstream from the Casitas Bonitas lift station needs to be extended from the current discharge location to a proposed gravity sewer at Rose Lane and Dysart Road because the pipe segment downstream of the current discharge point is out of capacity.
3. A new 15-inch gravity sewer along Dysart Road from Rose Lane to Missouri Avenue is required to convey wastewater flows from the Casitas Bonitas and Northern Parkway lift stations.

Prepared by:

Richard A. Humpherys, P.E.

Appendix D: Water Usage Bills

Jackie Hollmer

From: Ox Auxier
Sent: Monday, June 26, 2023 1:25 PM
To: Jackie Hollmer
Subject: FW: Dysart & Northern Pkway & Luke Field Wastewater Design Report
Attachments: 21-1329 - Northern Parkway Commerce Center - Sewer Demand Calculations.pdf

Here are the approved sewer demand calcs.

Daniel "Ox" Auxier, PE | EPS Group
Principal
Arizona: 1130 N. Alma School Rd., Ste. 120 | Mesa, AZ 85201
Colorado: 3760 E. 15th St., Ste. 101B | Loveland, CO 80538
C: **480.352.3431** | F: 480.503.2258
Mesa | Tucson | Goodyear | Phoenix | Loveland
dan.auxier@epsgroupinc.com
LinkedIn | Instagram | Facebook

From: David Snow <David.Snow@libertyutilities.com>
Sent: Monday, December 19, 2022 2:40 PM
To: Ox Auxier <dan.auxier@epsgroupinc.com>; Anthony Villarreal <AVillarreal@LPC.com>; Andrea Cotton <Andrea.Cotton@libertyutilities.com>
Cc: Casey Dillon <Casey.Dillon@Clarionpartners.com>; Burak Karatekeli <Burak.Karatekeli@epsgroupinc.com>; Julie Perry <Julie.Perry@libertyutilities.com>; Jackie Hollmer <Jackie.Hollmer@epsgroupinc.com>; Taylor Bills <Taylor.Bills@epsgroupinc.com>; Brandon Squire <Brandon.Squire@epsgroupinc.com>; Sara Toovey <Sara.Toovey@epsgroupinc.com>
Subject: RE: Dysart & Northern Pkway & Luke Field Wastewater Design Report

The lower flow values are acceptable based on flow rates from other similar Lincoln Property developments within the vicinity with similar uses.

David Snow | Liberty Utilities (Arizona) | Engineer IV
P: 623-240-2201 | C: 623-238-5503 | E: David.Snow@libertyutilities.com
14920 W. Camelback Rd., Litchfield Park, AZ 85340

From: Ox Auxier <dan.auxier@epsgroupinc.com>
Sent: Monday, December 19, 2022 9:18 AM
To: David Snow <David.Snow@libertyutilities.com>; Anthony Villarreal <AVillarreal@LPC.com>; Andrea Cotton <Andrea.Cotton@libertyutilities.com>
Cc: Casey Dillon <Casey.Dillon@Clarionpartners.com>; Burak Karatekeli <Burak.Karatekeli@epsgroupinc.com>; Julie Perry <Julie.Perry@libertyutilities.com>; Jackie Hollmer <Jackie.Hollmer@epsgroupinc.com>; Taylor Bills <Taylor.Bills@epsgroupinc.com>; Brandon Squire <Brandon.Squire@epsgroupinc.com>; Sara Toovey <Sara.Toovey@epsgroupinc.com>
Subject: RE: Dysart & Northern Pkway & Luke Field Wastewater Design Report

Good morning David. Following up to verify if this additional backup was able to provide any reassurance about going with the reduced demand rates.

Thanks!

Daniel "Ox" Auxier, PE | EPS Group
Principal
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dan.auxier@epsgroupinc.com

EPS offices will be closed for client appointments Dec 26-Jan 2 to provide flexibility for all of us to meet expectations and honor timelines while taking time to celebrate the holiday season with our families. Our leadership team is available to assist with time-sensitive requests.

LinkedIn | Instagram | Facebook

From: Ox Auxier
Sent: Thursday, December 15, 2022 3:44 PM
To: David Snow <David.Snow@libertyutilities.com>; Anthony Villarreal <AVillarreal@LPC.com>; Andrea Cotton <Andrea.Cotton@libertyutilities.com>
Cc: Casey Dillon <Casey.Dillon@Clarionpartners.com>; Burak Karatekeli <Burak.Karatekeli@epsgroupinc.com>; Julie Perry <Julie.Perry@libertyutilities.com>; Jackie Hollmer <Jackie.Hollmer@epsgroupinc.com>; Taylor Bills <Taylor.Bills@epsgroupinc.com>; Brandon Squire <Brandon.Squire@epsgroupinc.com>; Sara Toovey <Sara.Toovey@epsgroupinc.com>
Subject: RE: Dysart & Northern Pkway & Luke Field Wastewater Design Report

Hey David, thanks again for the good call this afternoon. As discussed, here are the actual water bills for the last four months from a 70-acre site that Lincoln has in the immediate vicinity of the project that is identical in use (its actually the exact same building). I'm also attaching a summary for your enjoyment… I would also point out that these bills include landscape irrigation so they are actually even more conservative. Based on the actual water usage, their average water daily demand is around 165 gpad so our request for 1,087 is well within the range and would probably more appropriately be the lower end 815 gpad that Goodyear has for light industrial. Please let us know if you have any questions or comments.

FYI, we are hoping to submit construction docs to you for all of the offsite improvements next week so we'd obviously appreciate if you could let us know if we can run with the 815 gpad (or 1,087 gpad) as quickly as possible.

Ox

Daniel "Ox" Auxier, PE | EPS Group
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EPS offices will be closed for client appointments Dec 26-Jan 2 to provide flexibility for all of us to meet expectations and honor timelines while taking time to celebrate the holiday season with our families. Our leadership team is available to assist with time-sensitive requests.

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From: Ox Auxier
Sent: Friday, December 9, 2022 1:59 PM
To: David Snow <David.Snow@libertyutilities.com>; Anthony Villarreal <AVillarreal@LPC.com>; Andrea Cotton <Andrea.Cotton@libertyutilities.com>
Cc: Casey Dillon <Casey.Dillon@Clarionpartners.com>; Burak Karatekeli <Burak.Karatekeli@epsgroupinc.com>; Julie Perry <Julie.Perry@libertyutilities.com>; Jackie Hollmer <Jackie.Hollmer@epsgroupinc.com>
Subject: RE: Dysart & Northern Pkway & Luke Field Wastewater Design Report

David,

As discussed this morning, here is the email I sent back in mid-August after our conversation about decreasing the design flow rates. I did confirm that LPC is only anticipating warehousing. Additionally, I did a little more research into what other local municipalities and Liberty's rates are dramatically higher than all of them. Here is a summary of what I found:

1. City of Glendale: 1,087 gpad
2. City of Scottsdale: None
3. City of Phoenix: 869 gpad (their published rate is actually 50 gal/1,000 SF but if you take the building sf and back calc it out this is the rate you end up with)
4. City of Buckeye: 1,000 gpad
5. City of Surprise: 1,200 gpad
6. Town of Gilbert: 414 gpad
7. City of Chandler: 1,300 pgad
8. Global Water: 1,200 gpad

With the confirmation of warehousing would that be appropriate?

Daniel "Ox" Auxier, PE | EPS Group
Principal
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From: David Snow <David.Snow@libertyutilities.com>
Sent: Thursday, December 8, 2022 4:04 PM
To: Anthony Villarreal <AVillarreal@LPC.com>; Ox Auxier <dan.auxier@epsgroupinc.com>; Andrea Cotton

Group Billing Invoice 7

August 24, 2022

Service	Meter Reading Present	Previous	Usage	Charges
Water	231700	214000	17700	267.39
Late Charge				5.73
Muni-Tax				0.12
Sales Tax				16.85
Past Due				181.77

Meter Read: Month 8, Day 24, Class 13

Due Date: 9/15/2022

Service From 7/27/2022 TO 8/24/2022

Customer Name:

Service Address: SE Corner Property on SRV

Account 348 Route Number: 4

Net Amount Due: 471.86

Pay Gross Amount after Due Date

Gross Amount Due: 481.94

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	216.00
Late Charge				5.30
Sales Tax				13.61
Past Due				153.07

Meter Read: Month 8, Day 24, Class 26

Due Date: 9/15/2022

Service From 7/27/2022 TO 8/24/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 349 Route Number: 4

Net Amount Due: 387.98

Pay Gross Amount after Due Date

Gross Amount Due: 396.80

Service	Meter Reading Present	Previous	Usage	Charges
Water	474100	424300	49800	88.44
Late Charge				3.93
Muni-Tax				0.32
Sales Tax				5.57
Past Due				61.69

Meter Read: Month 8, Day 24, Class 20

Due Date: 9/15/2022

Service From 7/27/2022 TO 8/24/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 350 Route Number: 4

Net Amount Due: 159.95

Pay Gross Amount after Due Date

Gross Amount Due: 165.35

Group Billing Invoice 7

Service	Meter Reading Present	Previous	Usage	Charges
Water	1100	1100	0	237.30
Late Charge				5.52
Sales Tax				14.95
Past Due				168.17

	Meter Read Month	Day	Class
Due Date: 9/15/2022	8	24	13

Service From 7/27/2022 TO 8/24/2022
Customer Name:
Service Address: SEC Property Along SRV
Account 351 Route Number: 4

Net Amount Due: 425.94
Pay Gross Amount after Due Date
Gross Amount Due: 435.33

Service	Meter Reading Present	Previous	Usage	Charges
	11900	11900	0	

	Meter Read Month	Day	Class
Due Date: 9/15/2022	8	24	20

Service From 7/27/2022 TO 8/24/2022
Customer Name:
Service Address: SEC Property Alone SRV
Account 352 Route Number: 4

Net Amount Due: 0.00
Pay Gross Amount after Due Date
Gross Amount Due: 3.00

Service	Meter Reading Present	Previous	Usage	Charges
Water	3713100	3584700	128400	352.68
Late Charge				6.74
Muni-Tax				0.83
Sales Tax				22.22
Past Due				249.48

	Meter Read Month	Day	Class
Due Date: 9/15/2022	8	24	11

Service From 7/27/2022 TO 8/24/2022
Customer Name:
Service Address: SEC Property Along SRV
Account 353 Route Number: 4

Net Amount Due: 631.95
Pay Gross Amount after Due Date
Gross Amount Due: 644.43

Service	Meter Reading Present	Previous	Usage	Charges
Water	1550000	1437600	112400	201.12
Late Charge				5.05
Muni-Tax				0.73
Sales Tax				12.67
Past Due				136.58

	Meter Read Month	Day	Class
Due Date: 9/15/2022	8	24	20

Service From 7/27/2022 TO 8/24/2022
Customer Name:
Service Address: SEC Property Along SRV
Account 354 Route Number: 4

Net Amount Due: 356.15
Pay Gross Amount after Due Date
Gross Amount Due: 364.49

Group Billing Invoice 7

Service	Meter Reading Present	Previous	Usage	Charges
Water	585100	585100	0	79.10
Late Charge				3.84
Sales Tax				4.98
Past Due				56.05

	Meter Read Month	Day	Class
Due Date: 9/15/2022	8	24	9

Service From 7/27/2022 TO 8/24/2022
Customer Name:
Service Address: SEC Property Alone SRV
Account 355 Route Number: 4

Net Amount Due: 143.97
Pay Gross Amount after Due Date
Gross Amount Due: 149.13

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	216.00
Late Charge				5.30
Sales Tax				13.61
Past Due				153.07

	Meter Read Month	Day	Class
Due Date: 9/15/2022	8	24	26

Service From 7/27/2022 TO 8/24/2022
Customer Name:
Service Address: SEC Property Alone SRV
Account 356 Route Number: 4

Net Amount Due: 387.98
Pay Gross Amount after Due Date
Gross Amount Due: 396.80

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	150.00
Late Charge				4.59
Sales Tax				9.45
Past Due				106.30

	Meter Read Month	Day	Class
Due Date: 9/15/2022	8	24	25

Service From 7/27/2022 TO 8/24/2022
Customer Name:
Service Address: Riser Room
Account 357 Route Number: 4

Net Amount Due: 270.34
Pay Gross Amount after Due Date
Gross Amount Due: 277.40

Service	Meter Reading Present	Previous	Usage	Charges
	500	500	0	

	Meter Read Month	Day	Class
Due Date: 9/15/2022	8	24	27

Service From 7/27/2022 TO 8/24/2022
Customer Name:
Service Address: SEC Property alone Srv
Account 358 Route Number: 4

Net Amount Due: 0.00
Pay Gross Amount after Due Date
Gross Amount Due: 3.00

Group Billing Invoice 7

Service	Meter Reading Present	Previous	Usage	Charges
	261300	261300	0	

Meter Read: Month 8, Day 24, Class 27

Due Date: 9/15/2022

Service From 7/27/2022 TO 8/24/2022

Customer Name:

Service Address: SEC Property along Srv

Account 359 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Service	Meter Reading Present	Previous	Usage	Charges
	39300	39300	0	

Meter Read: Month 8, Day 24, Class 27

Due Date: 9/15/2022

Service From 7/27/2022 TO 8/24/2022

Customer Name:

Service Address: SEC Property along Srv

Account 360 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Water	Late C	Muni-T	Adjust	Other	Other	Sales	Past Due
1,808.03	46.00	2.00				113.91	$1,266.18

Date Printed 8/24/2022

Did you know you can sign up for autopay?

CCR is available iin the office

Total Due: $3,236.12

Total Due After 9/15/2022 $3,323.67

Group Billing Invoice 32

September 27, 2022

Service	Meter Reading Present	Previous	Usage	Charges
Water	249800	231700	18100	268.07
Muni-Tax				0.12
Sales Tax				16.89

Meter Read: Month 9, Day 27, Class 13

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SE Corner Property on SRV

Account 348 Route Number: 4

Net Amount Due: 285.08

Pay Gross Amount after Due Date

Gross Amount Due: 292.36

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	216.00
Sales Tax				13.61

Meter Read: Month 9, Day 27, Class 26

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 349 Route Number: 4

Net Amount Due: 229.61

Pay Gross Amount after Due Date

Gross Amount Due: 236.05

Service	Meter Reading Present	Previous	Usage	Charges
Water	515000	474100	40900	72.42
Muni-Tax				0.27
Sales Tax				4.56

Meter Read: Month 9, Day 27, Class 20

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 350 Route Number: 4

Net Amount Due: 77.25

Pay Gross Amount after Due Date

Gross Amount Due: 81.41

Group Billing Invoice 32

Service	Meter Reading Present	Previous	Usage	Charges
Water	1100	1100	0	237.30
Sales Tax				14.95

Meter Read: Month 9, Day 27, Class 13

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 351 Route Number: 4

Net Amount Due: 252.25

Pay Gross Amount after Due Date

Gross Amount Due: 259.03

Service	Meter Reading Present	Previous	Usage	Charges
	11900	11900	0	

Meter Read: Month 9, Day 27, Class 20

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 352 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Service	Meter Reading Present	Previous	Usage	Charges
Water	3836700	3713100	173600	434.04
Muni-Tax				1.13
Sales Tax				27.34

Meter Read: Month 9, Day 27, Class 11

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 353 Route Number: 4

Net Amount Due: 462.51

Pay Gross Amount after Due Date

Gross Amount Due: 472.45

Service	Meter Reading Present	Previous	Usage	Charges
Water	1689800	1550000	139800	250.44
Muni-Tax				0.91
Sales Tax				15.78

Meter Read: Month 9, Day 27, Class 20

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 354 Route Number: 4

Net Amount Due: 267.13

Pay Gross Amount after Due Date

Gross Amount Due: 274.14

Group Billing Invoice 32

Service	Meter Reading Present	Previous	Usage	Charges
Water	585100	585100	0	79.10
Sales Tax				4.98

Meter Read: Month 9, Day 27, Class 9

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property Alone SRV

Account 355 Route Number: 4

Net Amount Due: 84.08

Pay Gross Amount after Due Date

Gross Amount Due: 88.34

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	216.00
Sales Tax				13.61

Meter Read: Month 9, Day 27, Class 26

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property Alone SRV

Account 356 Route Number: 4

Net Amount Due: 229.61

Pay Gross Amount after Due Date

Gross Amount Due: 236.05

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	150.00
Sales Tax				9.45

Meter Read: Month 9, Day 27, Class 25

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: Riser Room

Account 357 Route Number: 4

Net Amount Due: 159.45

Pay Gross Amount after Due Date

Gross Amount Due: 164.84

Service	Meter Reading Present	Previous	Usage	Charges
	500	500	0	

Meter Read: Month 9, Day 27, Class 27

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property alone Srv

Account 358 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Group Billing Invoice 32

Service	Meter Reading Present	Previous	Usage	Charges
	261300	261300	0	

Meter Read: Month 9, Day 27, Class 27

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property along Srv

Account 359 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Service	Meter Reading Present	Previous	Usage	Charges
	39300	39300	0	

Meter Read: Month 9, Day 27, Class 27

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property along Srv

Account 360 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Water	Late C	Muni-T	Adjust	Other	Other	Sales	Past Due
1,923.37		2.43				121.17	$0.00

Date Printed 9/27/2022

Turn your water off while brushing your teeth.

CCR is available in the office

Total Due: $2,046.97

Total Due After 10/15/2022 $2,116.67

Group Billing Invoice 32

October 26, 2022

Service	Meter Reading Present	Previous	Usage	Charges
Water	281900	249800	32100	291.87
Muni-Tax				0.21
Sales Tax				18.39

Meter Read: Month 10, Day 26, Class 13

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SE Corner Property on SRV

Account 348 Route Number: 4

Net Amount Due: 310.47

Pay Gross Amount after Due Date

Gross Amount Due: 318.13

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	216.00
Sales Tax				13.61

Meter Read: Month 10, Day 26, Class 26

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 349 Route Number: 4

Net Amount Due: 229.61

Pay Gross Amount after Due Date

Gross Amount Due: 236.05

Service	Meter Reading Present	Previous	Usage	Charges
Water	574800	515000	59800	106.44
Muni-Tax				0.39
Sales Tax				6.71

Meter Read: Month 10, Day 26, Class 20

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 350 Route Number: 4

Net Amount Due: 113.54

Pay Gross Amount after Due Date

Gross Amount Due: 118.24

Group Billing Invoice 32

Service	Meter Reading Present	Previous	Usage	Charges
Water	1100	1100	0	237.30
Sales Tax				14.95

Meter Read: Month 10 Day 26 Class 13

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property Alone SRV

Account 351 Route Number: 4

Net Amount Due: 252.25

Pay Gross Amount after Due Date

Gross Amount Due: 259.03

Service	Meter Reading Present	Previous	Usage	Charges
	11900	11900	0	

Meter Read: Month 10 Day 26 Class 20

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property Alone SRV

Account 352 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Service	Meter Reading Present	Previous	Usage	Charges
Water	4067200	3886700	180500	446.46
Muni-Tax				1.17
Sales Tax				28.13

Meter Read: Month 10 Day 26 Class 11

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property Alone SRV

Account 353 Route Number: 4

Net Amount Due: 475.76

Pay Gross Amount after Due Date

Gross Amount Due: 485.90

Service	Meter Reading Present	Previous	Usage	Charges
Water	1823700	1689800	133900	239.82
Muni-Tax				0.87
Sales Tax				15.11

Meter Read: Month 10 Day 26 Class 20

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property Alone SRV

Account 354 Route Number: 4

Net Amount Due: 255.80

Pay Gross Amount after Due Date

Gross Amount Due: 262.64

Group Billing Invoice 32

Service	Meter Reading Present	Previous	Usage	Charges
Water	585100	585100	0	79.10
Sales Tax				4.98

Meter Read: Month 10, Day 26, Class 9

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property Alone SRV

Account 355 Route Number: 4

Net Amount Due: 84.08

Pay Gross Amount after Due Date

Gross Amount Due: 88.34

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	216.00
Sales Tax				13.61

Meter Read: Month 10, Day 26, Class 26

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property Alone SRV

Account 356 Route Number: 4

Net Amount Due: 229.61

Pay Gross Amount after Due Date

Gross Amount Due: 236.05

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	150.00
Sales Tax				9.45

Meter Read: Month 10, Day 26, Class 25

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: Riser Room

Account 357 Route Number: 4

Net Amount Due: 159.45

Pay Gross Amount after Due Date

Gross Amount Due: 164.84

Service	Meter Reading Present	Previous	Usage	Charges
	500	500	0	

Meter Read: Month 10, Day 26, Class 27

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property alone Srv

Account 358 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Group Billing Invoice 32

Service	Meter Reading Present	Previous	Usage	Charges
	261300	261300	0	

Meter Read: Month 10, Day 26, Class 27

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property along Srv

Account 359 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Service	Meter Reading Present	Previous	Usage	Charges
Water	39400	39300	100	0.16
Sales Tax				0.01

Meter Read: Month 10, Day 26, Class 27

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property along Srv

Account 360 Route Number: 4

Net Amount Due: 0.17

Pay Gross Amount after Due Date

Gross Amount Due: 3.17

Water	Late C	Muni-T	Adjust	Other	Other	Sales	Past Due
1,983.15		2.64				124.95	$0.00

Date Printed 10/26/2022

Turn your water off while brushing your teeth.

CCR is available in the office

Total Due: $2,110.74

Total Due After 11/15/2022 $2,181.39

Group Billing Invoice 32

November 29, 2022

Service	Meter Reading Present	Previous	Usage	Charges
Water	313300	281900	31400	290.68
Muni-Tax				0.20
Sales Tax				18.31

	Meter Read Month	Day	Class
Due Date: 12/15/2022	11	28	13

Service From 10/26/2022 TO 11/28/2022
Customer Name:
Service Address: SE Corner Property on SRV
Account 348 Route Number: 4

Net Amount Due: 309.19
Pay Gross Amount after Due Date
Gross Amount Due: 316.83

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	216.00
Sales Tax				13.61

	Meter Read Month	Day	Class
Due Date: 12/15/2022	11	28	26

Service From 10/26/2022 TO 11/28/2022
Customer Name:
Service Address: SEC Property Along SRV
Account 349 Route Number: 4

Net Amount Due: 229.61
Pay Gross Amount after Due Date
Gross Amount Due: 236.05

Service	Meter Reading Present	Previous	Usage	Charges
Water	635000	574800	60200	107.16
Muni-Tax				0.39
Sales Tax				6.75

	Meter Read Month	Day	Class
Due Date: 12/15/2022	11	28	20

Service From 10/26/2022 TO 11/28/2022
Customer Name:
Service Address: SEC Property Along SRV
Account 350 Route Number: 4

Net Amount Due: 114.30
Pay Gross Amount after Due Date
Gross Amount Due: 119.01

Group Billing Invoice 32

Service	Meter Reading Present	Previous	Usage	Charges
Water	1100	1100	0	237.30
Sales Tax				14.95

Meter Read: Month 11 Day 28 Class 13

Due Date: 12/15/2022

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property Alone SRV

Account 351 Route Number: 4

Net Amount Due: 252.25

Pay Gross Amount after Due Date

Gross Amount Due: 259.03

Service	Meter Reading Present	Previous	Usage	Charges
	11900	11900	0	

Meter Read: Month 11 Day 28 Class 20

Due Date: 12/15/2022

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property Alone SRV

Account 352 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Service	Meter Reading Present	Previous	Usage	Charges
Water	4202200	4067200	135000	364.56
Muni-Tax				0.88
Sales Tax				22.97

Meter Read: Month 11 Day 28 Class 11

Due Date: 12/15/2022

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property Alone SRV

Account 353 Route Number: 4

Net Amount Due: 388.41

Pay Gross Amount after Due Date

Gross Amount Due: 397.24

Service	Meter Reading Present	Previous	Usage	Charges
Water	1929500	1823700	105800	189.24
Muni-Tax				0.69
Sales Tax				11.92

Meter Read: Month 11 Day 28 Class 20

Due Date: 12/15/2022

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property Alone SRV

Account 354 Route Number: 4

Net Amount Due: 201.85

Pay Gross Amount after Due Date

Gross Amount Due: 207.88

Group Billing Invoice 32

Service	Meter Reading Present	Previous	Usage	Charges
Water	585100	585100	0	79.10
Sales Tax				4.98

Meter Read: Month 11 Day 28 Class 9

Due Date: 12/15/2022

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 355 Route Number: 4

Net Amount Due: 84.08

Pay Gross Amount after Due Date

Gross Amount Due: 88.34

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	216.00
Sales Tax				13.61

Meter Read: Month 11 Day 28 Class 26

Due Date: 12/15/2022

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 356 Route Number: 4

Net Amount Due: 229.61

Pay Gross Amount after Due Date

Gross Amount Due: 236.05

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	150.00
Sales Tax				9.45

Meter Read: Month 11 Day 28 Class 25

Due Date: 12/15/2022

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: Riser Room

Account 357 Route Number: 4

Net Amount Due: 159.45

Pay Gross Amount after Due Date

Gross Amount Due: 164.84

Service	Meter Reading Present	Previous	Usage	Charges
	500	500	0	

Meter Read: Month 11 Day 28 Class 27

Due Date: 12/15/2022

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property along Srv

Account 358 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Group Billing Invoice 32

Service	Meter Reading Present	Previous	Usage	Charges
Water	261400	261300	100	0.16
Sales Tax				0.01

	Meter Read Month	Day	Class
Due Date: 12/15/2022	11	28	27

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property along Srv

Account 359 Route Number: 4

Net Amount Due: 0.17

Pay Gross Amount after Due Date

Gross Amount Due: 3.17

Service	Meter Reading Present	Previous	Usage	Charges
	39400	39400	0	

	Meter Read Month	Day	Class
Due Date: 12/15/2022	11	28	27

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property along Srv

Account 360 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Water	Late C	Muni-T	Adjust	Other	Other	Sales	Past Due
1,850.20		2.16				116.56	$0.00

Date Printed 11/29/2022

Turn your water off while brushing your teeth.

CCR is available lin the office

Total Due: $1,968.92

Total Due After 12/15/2022 $2,037.44

Appendix E: Cost Estimate

Exhibit C: Cost Estimate

Prepared By: EPS Group
Project Name: Shared Infrastructure Improvements
EPS Project No.: 21-1329 & 22-0186

Total Phase Cost	
$	4,014,974.37

Description		Unit Price	Unit		Quantity		Cost
Fees & Permits							
Permit Fee		3.5%	%	$	3,643,332.00	$	127,516.62
Dust Control Permit	$	2,500.00	%		1.00	$	2,500.00
Bond Cost		1.25%	%	$	3,643,332.00	$	45,541.65
State & County Sales Tax		4.75%	%	$	3,643,332.00	$	172,876.10
Soils Testing Streets	$	2.00	%		11,604.00	$	23,208.00
					Subtotal:	$	371,642.37
Demolition							
Sawcut & Remove Existing Pavement	$	15.00	SY		6,000	$	90,000.00
					Subtotal:	$	90,000.00
Sewer - Offsite & Lift Station							
8" HDPE (DR 11) Force Main	$	80.00	LF		4,739	$	379,120.00
12" PVC (SDR-26) Sewer Line	$	230.00	LF		3,979	$	915,170.00
24" Steel Sleeve Casing Pipe & Concrete Piers	$	650.00	LF		100	$	65,000.00
5' Sewer Manhole; MAG 420	$	18,500.00	EA		12	$	222,000.00
Hydro Vac/Camera/Test	$	3.00	LF		8,718	$	26,154.00
Lift Station Complete	$	500,000.00	LS		1	$	500,000.00
Dysart Drain Crossing Complete	$	75,000.00	LS		1	$	75,000.00
Traffic Control	$	75,000.00	LS		1	$	75,000.00
Mobilization	$	15,000.00	LS		1	$	15,000.00
					Subtotal:	$	2,272,444.00
Sewer - Shared (Located on Northern Parkway Site)							
8" PVC (SDR-26) Sewer Line	$	170.00	LF		2,604	$	442,680.00
10" PVC (SDR-26) Sewer Line	$	200.00	LF		282	$	56,400.00
5' Sewer Manhole; MAG 420	$	18,500.00	EA		7	$	129,500.00
Hydro Vac/Camera/Test	$	3.00	LF		2,886	$	8,658.00
Jack & Bore Crossing	$	800.00	LF		140	$	112,000.00
Mobilization	$	15,000.00	LS		1	$	15,000.00
					Subtotal:	$	764,238.00
Paving							
4" AC/ 15" ABC	$	85.00	SY		6,000	$	510,000.00
Pavement Adjustment; MAG 270, 422	$	350.00	EA		19	$	6,650.00
					Subtotal:	$	516,650.00
					Construction Total:	$	3,643,332.00
					Total:	$	4,014,974.37

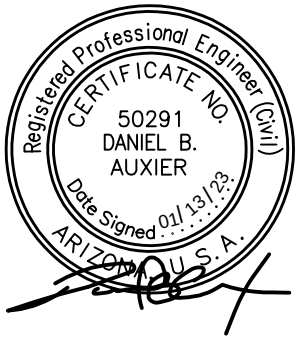


Exhibit 5B

On-Site Wastewater Engineering Report

Final Sewer Report

For

Luke Field - Onsite

Maricopa County, Arizona

Owner/Developer(s)
Lincoln Property Company
3131 E. Camelback Road, Ste. 318
Phoenix, AZ 85016
Tel: 602-912-8888
Email: avillarreal@lpc.com

By signing this study, I am attesting that I have relied upon this document's certified engineer's calculations and presentation. I have not verified all of the presented calculations for errors or omissions. My review is to only acknowledge that this master plan report's logic and disclosure as to how this development impacts utility owned infrastructure appears acceptable per the information provided herein, and that it conforms to the intent of the Utility's Development Guide. If there are any changes to the representations within this master plan, the engineer will submit a revised master plan for review. Approval of the report does not imply approval of equipment, material, devices, or other appurtenances that may be referenced.

David Snow 11/08/2023

Project No. 22-0186

Date: July 2023
Revised: November 2023

1130 N. Alma School Rd, Ste 120
Mesa, AZ 85201
o: 480.503.2250
f: 480.503.2258

Table of Contents

Appendices

1.0 Introduction

Luke Field (the Project) is a proposed industrial park development on an approximately 138-acre lot located directly southwest of the intersection of Northern Avenue and N Litchfield Road. The proposed site is currently utilized for agricultural purposes and lies within the unincorporated area of Maricopa County. The project can be further located in the Northwest quarter of Section 3, Township 2 North, Range 1 West, of the Gila and Salt River Meridian, Maricopa County, Arizona. See **Figure 1** for a vicinity map of the proposed site.

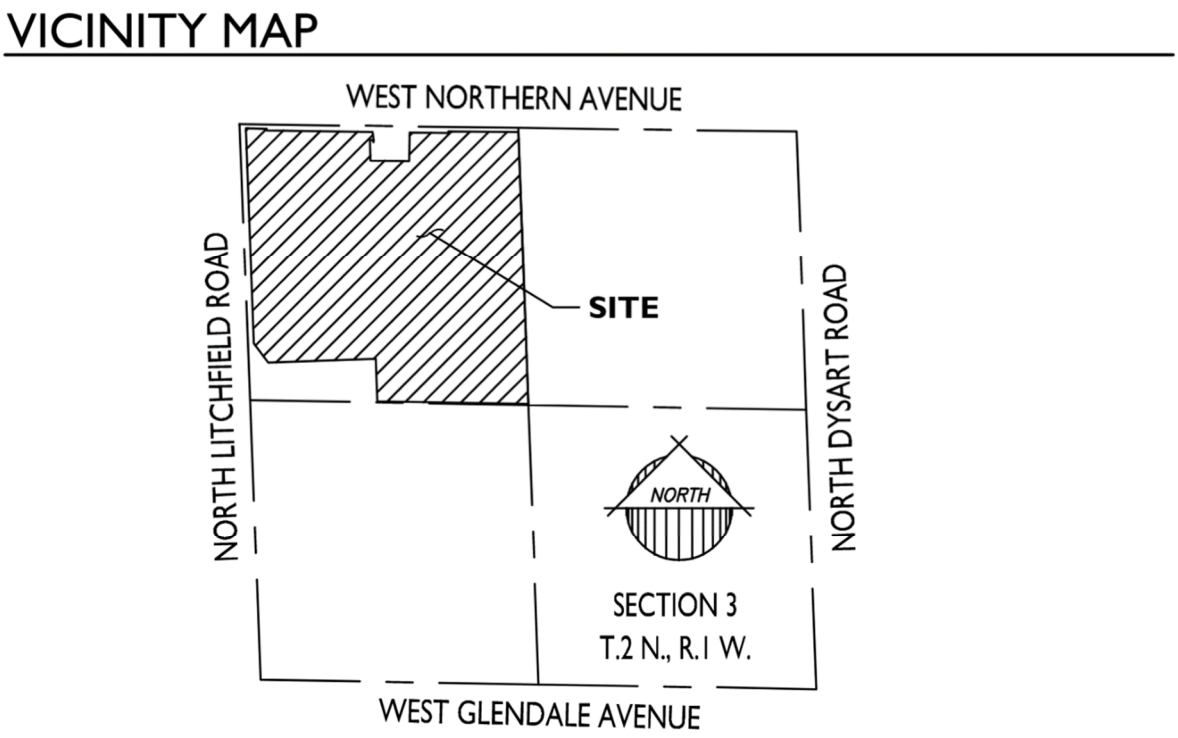


Figure 1 - Vicinity Map

This Final report is prepared to address sewer demand calculations for the proposed development. The calculations of sewer flow and pipe sizing in this report are based on system design criteria in the Liberty Utilities Guide Maricopa County, AZ. The site sewer service provider will be Liberty Water.

1.1 Project Description

The Project consists of three warehouse and distribution facilities totaling approximately 2.3 million square feet, multiple onsite parking lots, retention basins, and landscaped areas.

2.0 Projected Wastewater Flows

Although Liberty Utilities Development guide's average demand per acre is 1500 gpad, we used 815 gpad with approval from Liberty's Utilities. The lower average demand was based on the water usage bills of an existing building in the immediate vicinity which has identical size and usage. Sewer demand for the Peaking Factor is 3.0 times Average Day Demand. Demand calculation summary can be seen in the table below. Written Approval and water usage bills can be found in Appendix D.

Demand Calculations Summary

Average Day	112,226 gpd
Max Day	336,677 gpd

3.0 Existing Sewer System

The system will connect to the new 15" line south of Rose Lane on Dysart Road via an 8" force main.

Liberty is in the process of constructing the new Sarival Water Reclamation Facility, Sarival WRF, located on Sarival Road in Goodyear, Arizona. The Sarival WRF will be constructed as a membrane bioreactor plan with an operating capacity of four (4) million gallons per day (MGD) of wastewater treatment capacity expandable to 8 MGD. For the new plan, Liberty expects testing to begin in late 2023 or January 2024 with full operations in May 2024. Meanwhile, the Company's Palm Valley Water Reclamation Facility does not have any unallocated treatment capacity for new developments and connections. As such wastewater service for new service connections is not expected to be available in Liberty's service area until the estimated completion of Sarival WRF in May of 2024 or such earlier time when Liberty determines it has sufficient interim capacity to serve developer demands.

4.0 System Improvements

The proposed sewer service line will meet the requirements set in and be in compliance with the Liberty Utilities Development Guide Maricopa County, AZ. The system has been designed to maintain a minimum slope of 0.0033 ft/ft for the 8" line

and 0.0104 ft/ft for the 6" service, a peaking factor of 3.0 was used to determine pipe capacity when flowing full at a d/D of no more than 0.75.

The project will construct 8" sewer lines throughout the site and will connect to a proposed 8" line that will cross under the channel located along the east boundary of the site and will continue east along the southern boundary of the neighboring propoerty to a proposed lift station. The lift station will accept a total flow of 112,226 gpd from The Project. The lift station and proposed 8" offsite sewer line are not apart of the project and the design will be detailed in a separate report.

Each building will have its own metering manhole and sampling station as specified by Liberty Utility, refer to Appendix E for metering manhole and sampling station details. All sewer lines before the metering manhole and sampling station will be private, and sewer lines after will be public.

Prior to the completion of the project several improvements (by others) to the Liberty sewer system will be made within Dysart Road to accommodate the previously mentioned demands. An 8" force main will be constructed to cross the Dysart Drain, then will connect to a proposed 15" line, and will terminate at an existing 15" sewer line south of the intersection of Dysart Road and Missouri Avenue.

5.0 Sewer Model/Calculations

The proposed sewer system will have adequate capacity to meet the above requirements. Manning's equation was implemented in Excel to determine pipe capacity and sewer flows. The table below summarizes the flow capacity during peak demand for each additional contributing flow. For complete calculation see Sewer Capacity Calculations in Appendix B.

Wastewater Flow Summary Table for Luke Field

Section	Peak Demand (cfs)	Full Flow Capacity (cfs)	Percent Full (d/D)
SS32 to SS08	0.15	0.70	41%
SS07 to SS17	0.25	0.70	41%
SS17 to SS20	0.521	0.70	65%

6.0 Conclusion

- The Project complies with the Liberty Utilities Development Guide Maricopa County, AZ
- All onsite sewer lines are 8", sewer services are 6" and all gravity-fed
- The onsite sewer lines will connect to a proposed lift station (by others)
- Minimum slopes for 8" pipes are 0.33%
- The proposed site has a cumulative average daily flow of 112,226 gpd

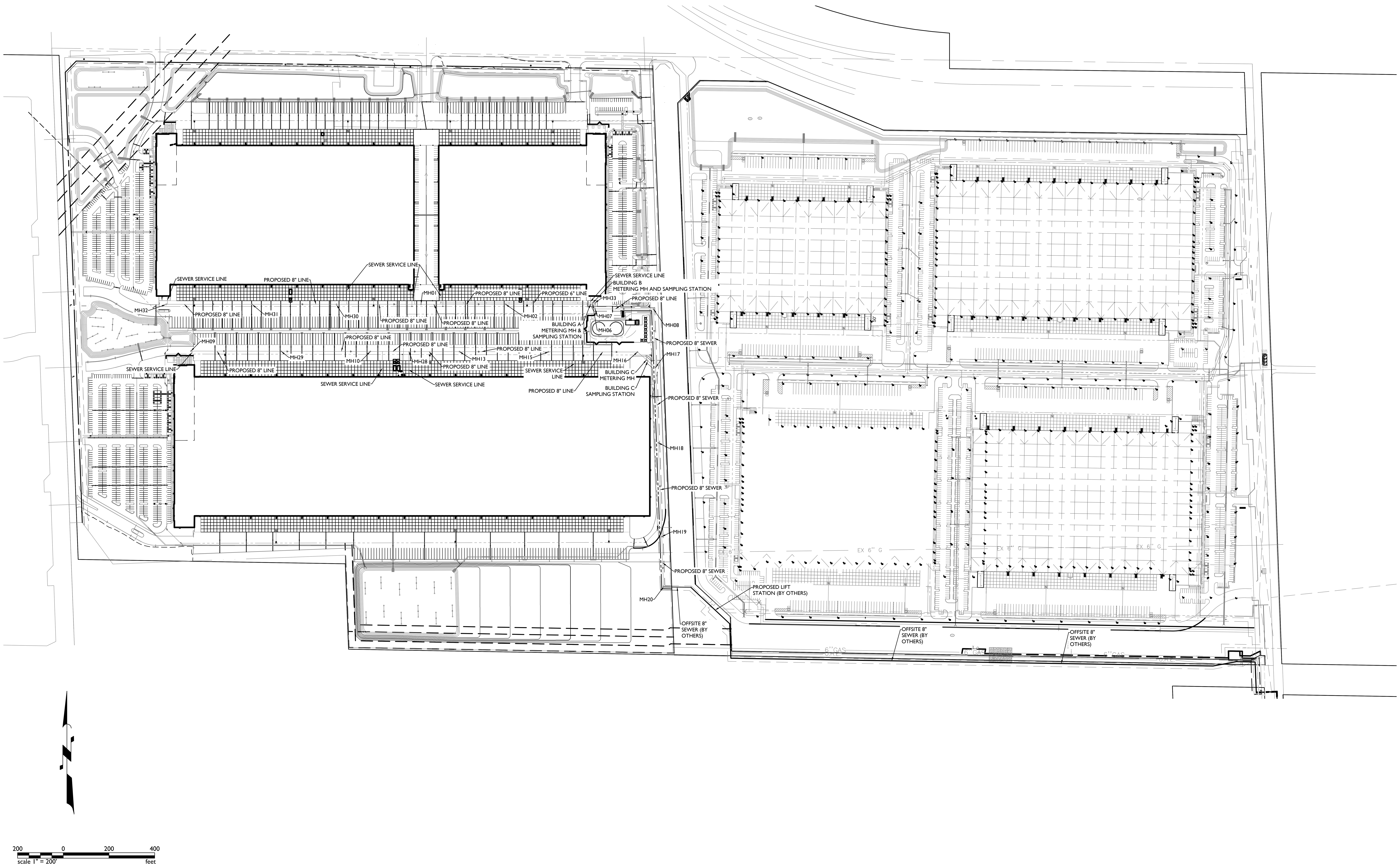
7.0 References

Liberty Utilities, 2014 Development Guide Maricopa County, AZ

Appendix A

Sewer Exhibit

EXHIBIT B



22-0186

Nov 07, 2023 2:41pm S:\Projects\2022\22-0186\Civil_Construction Documents\Design\Sewer\22-0186 — Sewer Exhibit.dwg

jhollmer

EPS GROUP
1130 N Alma School Road
Suite 120
Mesa, AZ 85201
T:480.503.2250 | F:480.503.2258
www.epsgroupinc.com

Project:
Luke Field
Maricopa County, AZ

Sewer Exhibit

Revisions:

Call at least two full working days before you begin excavation.
ARIZONA 811 Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602)263-1100

Designer: EPS
Drawn by: SET

Job No.
22-0186

EX01

Sheet No.
1
of 1

Appendix B

Sewer Calculations

Average Daily Sewer Flows and Pipe Capacity Using Manning's Equation

Project: Luke Field

Prepared by: Sara Toovey **Date:** 11/3/2023

Calculations Assume 815 GPD/acre

Sewer Pipe Information					Additional Flow Information					Peak Demand Information						Full Flow Check		Non-Pressurized Flow Calculations					
Sewer Reach	Length (ft)	Pipe Diameter (in)	Slope (ft/ft)	Manning's Roughness	Description	Size	Average Unit Daily Flow	Additional Upstream Flow (GPD)	Estimated Daily Flow (GPD)	Cumulative Daily Flow (GPD)	Equivalent Population	Peaking Factor	Peak Demand (GPD)	Peak Demand (MGD)	Peak Demand (cfs)	Full Flow Capacity (cfs)	Pressurized Flow?	Theta of flow (rad)	Depth of Flow (ft)	Percent Full (d/D)	Area of Flow (ft2)	Wetted Perimeter of flow (ft)	Velocity of Flow (fps)
Onsite Flows																							
SS32-SS31	370	8	0.0033	0.013	Building A	13.0 ac	815 gpad		10,595	10,595	13	3.00	31,785	0.032	0.049	0.70	NO	1.73	0.12	17%	0.0410	0.575	1.20
SS31-SS30	370	8	0.0033	0.013	Building A	13.0 ac	815 gpad	10,595	10,595	21,190	26	3.00	63,570	0.064	0.098	0.70	NO	2.11	0.17	25%	0.0698	0.704	1.41
SS30-SS01	370	8	0.0033	0.013	Building A	13.0 ac	815 gpad	21,190	10,595	31,785	39	3.00	95,355	0.095	0.148	0.70	NO	2.37	0.21	31%	0.0932	0.791	1.58
SS01-SS02	370	8	0.0033	0.013	Building A			0	0	31,785	39	3.00	95,355	0.095	0.148	0.70	NO	2.37	0.21	31%	0.0932	0.791	1.58
SS02-SS06	380	8	0.0033	0.013	Building A			0	0	31,785	39	3.00	95,355	0.095	0.148	0.70	NO	2.37	0.21	31%	0.0932	0.791	1.58
SS06-SS07	23	8	0.0033	0.013	Building A			0	0	31,785	39	3.00	95,355	0.095	0.148	0.70	NO	2.37	0.21	31%	0.0932	0.791	1.58
SS06-SS08	23	8	0.0033	0.013	Building A			0	0	31,785	39	3.00	95,355	0.095	0.148	0.70	NO	2.37	0.21	31%	0.0932	0.791	1.58
SS05-SS07	654	6	0.0033	0.013	Building B	27.0 ac	815 gpad	0	22,005	53,790	66	3.00	161,370	0.161	0.250	0.32	NO	3.79	0.33	66%	0.1374	0.948	1.82
SS07-SS08	256	8	0.0033	0.013	Building A & B			0	0	53,790	66	3.00	161,370	0.161	0.250	0.70	NO	2.80	0.28	41%	0.1365	0.932	1.83
SS08-SS17	257	8	0.0033	0.013	Building A & B			0	0	53,790	66	3.00	161,370	0.161	0.250	0.70	NO	2.80	0.28	41%	0.1365	0.932	1.83
SS09-SS29	390	8	0.0033	0.013	Building C	12.0 ac	815 gpad		9,739	9,739	12	3.00	29,218	0.029	0.045	0.70	NO	1.69	0.11	17%	0.0388	0.564	1.16
SS29-SS10	390	8	0.0033	0.013	Building C	12.0 ac	815 gpad	9,739	9,739	19,479	24	3.00	58,436	0.058	0.090	0.70	NO	2.06	0.16	24%	0.0657	0.688	1.38
SS10-SS13	390	8	0.0033	0.013	Building C	12.0 ac	815 gpad	19,479	9,739	29,218	36	3.00	87,653	0.088	0.136	0.70	NO	2.32	0.20	30%	0.0878	0.772	1.55
SS13-SS15	390	8	0.0033	0.013	Building C	12.0 ac	815 gpad	29,218	9,739	38,957	48	3.00	116,871	0.117	0.181	0.70	NO	2.52	0.23	35%	0.1079	0.841	1.68
SS15-SS16	389	8	0.0033	0.013	Building C	12.0 ac	815 gpad	38,957	9,739	48,696	60	3.00	146,089	0.146	0.226	0.70	NO	2.71	0.26	39%	0.1269	0.902	1.78
SS16-SS17	52	8	0.0033	0.013	Building C	12.0 ac	815 gpad	48,696	9,739	58,436	72	3.00	175,307	0.175	0.271	0.70	NO	2.87	0.29	43%	0.1450	0.958	1.87
SS17-SS18	397	8	0.0033	0.013				112,226	0	112,226	138	3.00	336,677	0.337	0.521	0.70	NO	3.73	0.43	65%	0.2381	1.244	2.19
SS18-SS19	411	8	0.0033	0.013					0	112,226	138	3.00	336,677	0.337	0.521	0.70	NO	3.73	0.43	65%	0.2381	1.244	2.19
SS19-SS20	321	8	0.0033	0.013					0	112,226	138	3.00	336,677	0.337	0.521	0.70	NO	3.73	0.43	65%	0.2381	1.244	2.19

Notes:

Appendix C

Sewer Cost Estimate

Onsite Engineer's Cost Estimate **Date: 11/3/2023**

Project Name: Luke Field - Onsite Sewer
EPS Project No.: 22-0186

Description	Qty.	Unit		Unit Price		Total Cost
Private Sewer						
8" PVC (SDR35) Sewer Line	3,923	LF	$	40.00	$	156,920.00
5' Sewer Manhole; MAG 420	11	EA	$	14,000.00	$	154,000.00
6" PVC (SDR35) Sewer Service	542	EA	$	35.00	$	18,970.00
				Subtotal:	$	329,890.00
Public Sewer						
8" PVC (SDR35) Sewer Line	1,528	LF	$	40.00	$	61,120.00
Metering Manhole	3	LF	$	15,000.00	$	45,000.00
Sampling Station	3	LF	$	5,000.00	$	15,000.00
5' Sewer Manhole; MAG 420	7	EA	$	14,000.00	$	98,000.00
				Subtotal:	$	219,120.00
				Owners Contingency (10%) =	$	54,901.00
				Construction Total =	$	603,911.00

Appendix D

Water Usage Bills

Jackie Hollmer

From: Ox Auxier
Sent: Monday, June 26, 2023 1:25 PM
To: Jackie Hollmer
Subject: FW: Dysart & Northern Pkway & Luke Field Wastewater Design Report
Attachments: 21-1329 - Northern Parkway Commerce Center - Sewer Demand Calculations.pdf

Here are the approved sewer demand calcs.

Daniel "Ox" Auxier, PE | EPS Group
Principal
Arizona: 1130 N. Alma School Rd., Ste. 120 | Mesa, AZ 85201
Colorado: 3760 E. 15th St., Ste. 101B | Loveland, CO 80538
C: **480.352.3431** | F: 480.503.2258
Mesa | Tucson | Goodyear | Phoenix | Loveland
dan.auxier@epsgroupinc.com
LinkedIn | Instagram | Facebook

From: David Snow <David.Snow@libertyutilities.com>
Sent: Monday, December 19, 2022 2:40 PM
To: Ox Auxier <dan.auxier@epsgroupinc.com>; Anthony Villarreal <AVillarreal@LPC.com>; Andrea Cotton <Andrea.Cotton@libertyutilities.com>
Cc: Casey Dillon <Casey.Dillon@Clarionpartners.com>; Burak Karatekeli <Burak.Karatekeli@epsgroupinc.com>; Julie Perry <Julie.Perry@libertyutilities.com>; Jackie Hollmer <Jackie.Hollmer@epsgroupinc.com>; Taylor Bills <Taylor.Bills@epsgroupinc.com>; Brandon Squire <Brandon.Squire@epsgroupinc.com>; Sara Toovey <Sara.Toovey@epsgroupinc.com>
Subject: RE: Dysart & Northern Pkway & Luke Field Wastewater Design Report

The lower flow values are acceptable based on flow rates from other similar Lincoln Property developments within the vicinity with similar uses.

David Snow | Liberty Utilities (Arizona) | Engineer IV
P: 623-240-2201 | C: 623-238-5503 | E: David.Snow@libertyutilities.com
14920 W. Camelback Rd., Litchfield Park, AZ 85340

From: Ox Auxier <dan.auxier@epsgroupinc.com>
Sent: Monday, December 19, 2022 9:18 AM
To: David Snow <David.Snow@libertyutilities.com>; Anthony Villarreal <AVillarreal@LPC.com>; Andrea Cotton <Andrea.Cotton@libertyutilities.com>
Cc: Casey Dillon <Casey.Dillon@Clarionpartners.com>; Burak Karatekeli <Burak.Karatekeli@epsgroupinc.com>; Julie Perry <Julie.Perry@libertyutilities.com>; Jackie Hollmer <Jackie.Hollmer@epsgroupinc.com>; Taylor Bills <Taylor.Bills@epsgroupinc.com>; Brandon Squire <Brandon.Squire@epsgroupinc.com>; Sara Toovey <Sara.Toovey@epsgroupinc.com>
Subject: RE: Dysart & Northern Pkway & Luke Field Wastewater Design Report

Good morning David. Following up to verify if this additional backup was able to provide any reassurance about going with the reduced demand rates.

Thanks!

Daniel "Ox" Auxier, PE | EPS Group
Principal
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Colorado: 3760 E. 15th St., Ste. 101B | Loveland, CO 80538
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dan.auxier@epsgroupinc.com

EPS offices will be closed for client appointments Dec 26-Jan 2 to provide flexibility for all of us to meet expectations and honor timelines while taking time to celebrate the holiday season with our families. Our leadership team is available to assist with time-sensitive requests.

LinkedIn | Instagram | Facebook

From: Ox Auxier
Sent: Thursday, December 15, 2022 3:44 PM
To: David Snow <David.Snow@libertyutilities.com>; Anthony Villarreal <AVillarreal@LPC.com>; Andrea Cotton <Andrea.Cotton@libertyutilities.com>
Cc: Casey Dillon <Casey.Dillon@Clarionpartners.com>; Burak Karatekeli <Burak.Karatekeli@epsgroupinc.com>; Julie Perry <Julie.Perry@libertyutilities.com>; Jackie Hollmer <Jackie.Hollmer@epsgroupinc.com>; Taylor Bills <Taylor.Bills@epsgroupinc.com>; Brandon Squire <Brandon.Squire@epsgroupinc.com>; Sara Toovey <Sara.Toovey@epsgroupinc.com>
Subject: RE: Dysart & Northern Pkway & Luke Field Wastewater Design Report

Hey David, thanks again for the good call this afternoon. As discussed, here are the actual water bills for the last four months from a 70-acre site that Lincoln has in the immediate vicinity of the project that is identical in use (its actually the exact same building). I'm also attaching a summary for your enjoyment… I would also point out that these bills include landscape irrigation so they are actually even more conservative. Based on the actual water usage, their average water daily demand is around 165 gpad so our request for 1,087 is well within the range and would probably more appropriately be the lower end 815 gpad that Goodyear has for light industrial. Please let us know if you have any questions or comments.

FYI, we are hoping to submit construction docs to you for all of the offsite improvements next week so we'd obviously appreciate if you could let us know if we can run with the 815 gpad (or 1,087 gpad) as quickly as possible.

Ox

11/08/2023

Daniel "Ox" Auxier, PE | EPS Group
Principal
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EPS offices will be closed for client appointments Dec 26-Jan 2 to provide flexibility for all of us to meet expectations and honor timelines while taking time to celebrate the holiday season with our families. Our leadership team is available to assist with time-sensitive requests.

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From: Ox Auxier
Sent: Friday, December 9, 2022 1:59 PM
To: David Snow <David.Snow@libertyutilities.com>; Anthony Villarreal <AVillarreal@LPC.com>; Andrea Cotton <Andrea.Cotton@libertyutilities.com>
Cc: Casey Dillon <Casey.Dillon@Clarionpartners.com>; Burak Karatekeli <Burak.Karatekeli@epsgroupinc.com>; Julie Perry <Julie.Perry@libertyutilities.com>; Jackie Hollmer <Jackie.Hollmer@epsgroupinc.com>
Subject: RE: Dysart & Northern Pkway & Luke Field Wastewater Design Report

David,

As discussed this morning, here is the email I sent back in mid-August after our conversation about decreasing the design flow rates. I did confirm that LPC is only anticipating warehousing. Additionally, I did a little more research into what other local municipalities and Liberty's rates are dramatically higher than all of them. Here is a summary of what I found:

1. City of Glendale: 1,087 gpad
2. City of Scottsdale: None
3. City of Phoenix: 869 gpad (their published rate is actually 50 gal/1,000 SF but if you take the building sf and back calc it out this is the rate you end up with)
4. City of Buckeye: 1,000 gpad
5. City of Surprise: 1,200 gpad
6. Town of Gilbert: 414 gpad
7. City of Chandler: 1,300 pgad
8. Global Water: 1,200 gpad

With the confirmation of warehousing would that be appropriate?

Daniel "Ox" Auxier, PE | EPS Group
Principal
Arizona: 1130 N. Alma School Rd., Ste. 120 | Mesa, AZ 85201
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From: David Snow <David.Snow@libertyutilities.com>
Sent: Thursday, December 8, 2022 4:04 PM
To: Anthony Villarreal <AVillarreal@LPC.com>; Ox Auxier <dan.auxier@epsgroupinc.com>; Andrea Cotton

Group Billing Invoice 7

August 24, 2022

Service	Meter Reading Present	Previous	Usage	Charges
Water	231700	214000	17700	267.39
Late Charge				5.73
Muni-Tax				0.12
Sales Tax				16.85
Past Due				181.77

	Meter Read Month	Day	Class
Due Date: 9/15/2022	8	24	13

Service From 7/27/2022 TO 8/24/2022

Customer Name:

Service Address: SE Corner Property on SRV

Account 348 Route Number: 4

Net Amount Due: 471.86

Pay Gross Amount after Due Date

Gross Amount Due: 481.94

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	216.00
Late Charge				5.30
Sales Tax				13.61
Past Due				153.07

	Meter Read Month	Day	Class
Due Date: 9/15/2022	8	24	26

Service From 7/27/2022 TO 8/24/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 349 Route Number: 4

Net Amount Due: 387.98

Pay Gross Amount after Due Date

Gross Amount Due: 396.80

Service	Meter Reading Present	Previous	Usage	Charges
Water	474100	424300	49800	88.44
Late Charge				3.93
Muni-Tax				0.32
Sales Tax				5.57
Past Due				61.69

	Meter Read Month	Day	Class
Due Date: 9/15/2022	8	24	20

Service From 7/27/2022 TO 8/24/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 350 Route Number: 4

Net Amount Due: 159.95

Pay Gross Amount after Due Date

Gross Amount Due: 165.35

Group Billing Invoice 7

Service	Meter Reading Present	Previous	Usage	Charges
Water	1100	1100	0	237.30
Late Charge				5.52
Sales Tax				14.95
Past Due				168.17

	Meter Read Month	Day	Class
Due Date: 9/15/2022	8	24	13

Service From 7/27/2022 TO 8/24/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 351 Route Number: 4

Net Amount Due: 425.94

Pay Gross Amount after Due Date

Gross Amount Due: 435.33

Service	Meter Reading Present	Previous	Usage	Charges
	11900	11900	0	

	Meter Read Month	Day	Class
Due Date: 9/15/2022	8	24	20

Service From 7/27/2022 TO 8/24/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 352 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Service	Meter Reading Present	Previous	Usage	Charges
Water	3713100	3584700	128400	352.68
Late Charge				6.74
Muni-Tax				0.83
Sales Tax				22.22
Past Due				249.48

	Meter Read Month	Day	Class
Due Date: 9/15/2022	8	24	11

Service From 7/27/2022 TO 8/24/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 353 Route Number: 4

Net Amount Due: 631.95

Pay Gross Amount after Due Date

Gross Amount Due: 644.43

Service	Meter Reading Present	Previous	Usage	Charges
Water	1550000	1437600	112400	201.12
Late Charge				5.05
Muni-Tax				0.73
Sales Tax				12.67
Past Due				136.58

	Meter Read Month	Day	Class
Due Date: 9/15/2022	8	24	20

Service From 7/27/2022 TO 8/24/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 354 Route Number: 4

Net Amount Due: 356.15

Pay Gross Amount after Due Date

Gross Amount Due: 364.49

Group Billing Invoice 7

Service	Meter Reading Present	Previous	Usage	Charges
Water	585100	585100	0	79.10
Late Charge				3.84
Sales Tax				4.98
Past Due				56.05

	Meter Read Month	Day	Class
Due Date: 9/15/2022	8	24	9

Service From 7/27/2022 TO 8/24/2022
Customer Name:
Service Address: SEC Property Along SRV
Account 355 Route Number: 4

Net Amount Due: 143.97
Pay Gross Amount after Due Date
Gross Amount Due: 149.13

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	216.00
Late Charge				5.30
Sales Tax				13.61
Past Due				153.07

	Meter Read Month	Day	Class
Due Date: 9/15/2022	8	24	26

Service From 7/27/2022 TO 8/24/2022
Customer Name:
Service Address: SEC Property Along SRV
Account 356 Route Number: 4

Net Amount Due: 387.98
Pay Gross Amount after Due Date
Gross Amount Due: 396.80

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	150.00
Late Charge				4.59
Sales Tax				9.45
Past Due				106.30

	Meter Read Month	Day	Class
Due Date: 9/15/2022	8	24	25

Service From 7/27/2022 TO 8/24/2022
Customer Name:
Service Address: Riser Room
Account 357 Route Number: 4

Net Amount Due: 270.34
Pay Gross Amount after Due Date
Gross Amount Due: 277.40

Service	Meter Reading Present	Previous	Usage	Charges
	500	500	0	

	Meter Read Month	Day	Class
Due Date: 9/15/2022	8	24	27

Service From 7/27/2022 TO 8/24/2022
Customer Name:
Service Address: SEC Property along Srv
Account 358 Route Number: 4

Net Amount Due: 0.00
Pay Gross Amount after Due Date
Gross Amount Due: 3.00

Group Billing Invoice 7

Service	Meter Reading Present	Previous	Usage	Charges
	261300	261300	0	

Meter Read: Month 8, Day 24, Class 27

Due Date: 9/15/2022

Service From 7/27/2022 TO 8/24/2022

Customer Name:

Service Address: SEC Property along Srv

Account 359 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Service	Meter Reading Present	Previous	Usage	Charges
	39300	39300	0	

Meter Read: Month 8, Day 24, Class 27

Due Date: 9/15/2022

Service From 7/27/2022 TO 8/24/2022

Customer Name:

Service Address: SEC Property along Srv

Account 360 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Water	Late C	Muni-T	Adjust	Other	Other	Sales	Past Due
1,808.03	46.00	2.00				113.91	$1,266.18

Date Printed 8/24/2022

Did you know you can sign up for autopay?

CCR is available iin the office

Total Due: $3,236.12

Total Due After 9/15/2022 $3,323.67

Group Billing Invoice 32

September 27, 2022

Service	Meter Reading Present	Previous	Usage	Charges
Water	249800	231700	18100	268.07
Muni-Tax				0.12
Sales Tax				16.89

Meter Read: Month 9, Day 27, Class 13

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SE Corner Property on SRV

Account 348 Route Number: 4

Net Amount Due: 285.08

Pay Gross Amount after Due Date

Gross Amount Due: 292.36

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	216.00
Sales Tax				13.61

Meter Read: Month 9, Day 27, Class 26

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 349 Route Number: 4

Net Amount Due: 229.61

Pay Gross Amount after Due Date

Gross Amount Due: 236.05

Service	Meter Reading Present	Previous	Usage	Charges
Water	515000	474100	40900	72.42
Muni-Tax				0.27
Sales Tax				4.56

Meter Read: Month 9, Day 27, Class 20

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 350 Route Number: 4

Net Amount Due: 77.25

Pay Gross Amount after Due Date

Gross Amount Due: 81.41

Group Billing Invoice 32

Service	Meter Reading Present	Previous	Usage	Charges
Water	1100	1100	0	237.30
Sales Tax				14.95

Meter Read: Month 9, Day 27, Class 13

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 351 Route Number: 4

Net Amount Due: 252.25

Pay Gross Amount after Due Date

Gross Amount Due: 259.03

Service	Meter Reading Present	Previous	Usage	Charges
	11900	11900	0	

Meter Read: Month 9, Day 27, Class 20

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 352 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Service	Meter Reading Present	Previous	Usage	Charges
Water	3886700	3713100	173600	434.04
Muni-Tax				1.13
Sales Tax				27.34

Meter Read: Month 9, Day 27, Class 11

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 353 Route Number: 4

Net Amount Due: 462.51

Pay Gross Amount after Due Date

Gross Amount Due: 472.45

Service	Meter Reading Present	Previous	Usage	Charges
Water	1689800	1550000	139800	250.44
Muni-Tax				0.91
Sales Tax				15.78

Meter Read: Month 9, Day 27, Class 20

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 354 Route Number: 4

Net Amount Due: 267.13

Pay Gross Amount after Due Date

Gross Amount Due: 274.14

Group Billing Invoice 32

Service	Meter Reading Present	Previous	Usage	Charges
Water	585100	585100	0	79.10
Sales Tax				4.98

Meter Read: Month 9, Day 27, Class 9

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 355 Route Number: 4

Net Amount Due: 84.08

Pay Gross Amount after Due Date

Gross Amount Due: 88.34

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	216.00
Sales Tax				13.61

Meter Read: Month 9, Day 27, Class 26

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 356 Route Number: 4

Net Amount Due: 229.61

Pay Gross Amount after Due Date

Gross Amount Due: 236.05

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	150.00
Sales Tax				9.45

Meter Read: Month 9, Day 27, Class 25

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: Riser Room

Account 357 Route Number: 4

Net Amount Due: 159.45

Pay Gross Amount after Due Date

Gross Amount Due: 164.84

Service	Meter Reading Present	Previous	Usage	Charges
	500	500	0	

Meter Read: Month 9, Day 27, Class 27

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property along Srv

Account 358 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Group Billing Invoice 32

Service	Meter Reading Present	Previous	Usage	Charges
	261300	261300	0	

Meter Read: Month 9, Day 27, Class 27

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property along Srv

Account 359 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Service	Meter Reading Present	Previous	Usage	Charges
	39300	39300	0	

Meter Read: Month 9, Day 27, Class 27

Due Date: 10/15/2022

Service From 8/24/2022 TO 9/27/2022

Customer Name:

Service Address: SEC Property along Srv

Account 360 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Water	Late C	Muni-T	Adjust	Other	Other	Sales	Past Due
1,923.37		2.43				121.17	$0.00

Date Printed 9/27/2022

Turn your water off while brushing your teeth.

CCR is available iin the office

Total Due: $2,046.97

Total Due After 10/15/2022 $2,116.67

Group Billing Invoice 32

October 26, 2022

Service	Meter Reading Present	Previous	Usage	Charges
Water	281900	249800	32100	291.87
Muni-Tax				0.21
Sales Tax				18.39

	Meter Read Month	Day	Class
Due Date: 11/15/2022	10	26	13

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SE Corner Property on SRV

Account 348 Route Number: 4

Net Amount Due: 310.47

Pay Gross Amount after Due Date

Gross Amount Due: 318.13

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	216.00
Sales Tax				13.61

	Meter Read Month	Day	Class
Due Date: 11/15/2022	10	26	26

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 349 Route Number: 4

Net Amount Due: 229.61

Pay Gross Amount after Due Date

Gross Amount Due: 236.05

Service	Meter Reading Present	Previous	Usage	Charges
Water	574800	515000	59800	106.44
Muni-Tax				0.39
Sales Tax				6.71

	Meter Read Month	Day	Class
Due Date: 11/15/2022	10	26	20

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 350 Route Number: 4

Net Amount Due: 113.54

Pay Gross Amount after Due Date

Gross Amount Due: 118.24

Group Billing Invoice 32

Service	Meter Reading Present	Previous	Usage	Charges
Water	1100	1100	0	237.30
Sales Tax				14.95

Meter Read: Month 10, Day 26, Class 13

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property Alone SRV

Account 351 Route Number: 4

Net Amount Due: 252.25

Pay Gross Amount after Due Date

Gross Amount Due: 259.03

Service	Meter Reading Present	Previous	Usage	Charges
	11900	11900	0	

Meter Read: Month 10, Day 26, Class 20

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property Alone SRV

Account 352 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Service	Meter Reading Present	Previous	Usage	Charges
Water	4067200	3886700	180500	446.46
Muni-Tax				1.17
Sales Tax				28.13

Meter Read: Month 10, Day 26, Class 11

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property Alone SRV

Account 353 Route Number: 4

Net Amount Due: 475.76

Pay Gross Amount after Due Date

Gross Amount Due: 485.90

Service	Meter Reading Present	Previous	Usage	Charges
Water	1823700	1689800	133900	239.82
Muni-Tax				0.87
Sales Tax				15.11

Meter Read: Month 10, Day 26, Class 20

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property Alone SRV

Account 354 Route Number: 4

Net Amount Due: 255.80

Pay Gross Amount after Due Date

Gross Amount Due: 262.64

Group Billing Invoice 32

Service	Meter Reading Present	Previous	Usage	Charges
Water	585100	585100	0	79.10
Sales Tax				4.98

Meter Read: Month 10, Day 26, Class 9

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 355 Route Number: 4

Net Amount Due: 84.08

Pay Gross Amount after Due Date

Gross Amount Due: 88.34

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	216.00
Sales Tax				13.61

Meter Read: Month 10, Day 26, Class 26

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 356 Route Number: 4

Net Amount Due: 229.61

Pay Gross Amount after Due Date

Gross Amount Due: 236.05

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	150.00
Sales Tax				9.45

Meter Read: Month 10, Day 26, Class 25

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: Riser Room

Account 357 Route Number: 4

Net Amount Due: 159.45

Pay Gross Amount after Due Date

Gross Amount Due: 164.84

Service	Meter Reading Present	Previous	Usage	Charges
	500	500	0	

Meter Read: Month 10, Day 26, Class 27

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property along Srv

Account 358 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Group Billing Invoice 32

Service	Meter Reading Present	Previous	Usage	Charges
	261300	261300	0	

Meter Read: Month 10, Day 26, Class 27

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property along Srv

Account 359 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Service	Meter Reading Present	Previous	Usage	Charges
Water	39400	39300	100	0.16
Sales Tax				0.01

Meter Read: Month 10, Day 26, Class 27

Due Date: 11/15/2022

Service From 9/27/2022 TO 10/26/2022

Customer Name:

Service Address: SEC Property along Srv

Account 360 Route Number: 4

Net Amount Due: 0.17

Pay Gross Amount after Due Date

Gross Amount Due: 3.17

Water	Late C	Muni-T	Adjust	Other	Other	Sales	Past Due
1,983.15		2.64				124.95	$0.00

Date Printed 10/26/2022

Turn your water off while brushing your teeth.

CCR is available iin the office

Total Due: $2,110.74

Total Due After 11/15/2022 $2,181.39

Group Billing Invoice 32

November 29, 2022

Service	Meter Reading Present	Previous	Usage	Charges
Water	313300	281900	31400	290.68
Muni-Tax				0.20
Sales Tax				18.31

	Meter Read Month	Day	Class
Due Date: 12/15/2022	11	28	13

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SE Corner Property on SRV

Account 348 Route Number: 4

Net Amount Due: 309.19

Pay Gross Amount after Due Date

Gross Amount Due: 316.83

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	216.00
Sales Tax				13.61

	Meter Read Month	Day	Class
Due Date: 12/15/2022	11	28	26

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 349 Route Number: 4

Net Amount Due: 229.61

Pay Gross Amount after Due Date

Gross Amount Due: 236.05

Service	Meter Reading Present	Previous	Usage	Charges
Water	635000	574800	60200	107.16
Muni-Tax				0.39
Sales Tax				6.75

	Meter Read Month	Day	Class
Due Date: 12/15/2022	11	28	20

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 350 Route Number: 4

Net Amount Due: 114.30

Pay Gross Amount after Due Date

Gross Amount Due: 119.01

Group Billing Invoice 32

Service	Meter Reading Present	Previous	Usage	Charges
Water	1100	1100	0	237.30
Sales Tax				14.95

Meter Read: Month 11 Day 28 Class 13

Due Date: 12/15/2022

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 351 Route Number: 4

Net Amount Due: 252.25

Pay Gross Amount after Due Date

Gross Amount Due: 259.03

Service	Meter Reading Present	Previous	Usage	Charges
	11900	11900	0	

Meter Read: Month 11 Day 28 Class 20

Due Date: 12/15/2022

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 352 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Service	Meter Reading Present	Previous	Usage	Charges
Water	4202200	4067200	135000	364.56
Muni-Tax				0.88
Sales Tax				22.97

Meter Read: Month 11 Day 28 Class 11

Due Date: 12/15/2022

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 353 Route Number: 4

Net Amount Due: 388.41

Pay Gross Amount after Due Date

Gross Amount Due: 397.24

Service	Meter Reading Present	Previous	Usage	Charges
Water	1929500	1823700	105800	189.24
Muni-Tax				0.69
Sales Tax				11.92

Meter Read: Month 11 Day 28 Class 20

Due Date: 12/15/2022

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 354 Route Number: 4

Net Amount Due: 201.85

Pay Gross Amount after Due Date

Gross Amount Due: 207.88

Group Billing Invoice 32

Service	Meter Reading Present	Previous	Usage	Charges
Water	585100	585100	0	79.10
Sales Tax				4.98

Meter Read: Month 11 Day 28 Class 9

Due Date: 12/15/2022

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 355 Route Number: 4

Net Amount Due: 84.08

Pay Gross Amount after Due Date

Gross Amount Due: 88.34

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	216.00
Sales Tax				13.61

Meter Read: Month 11 Day 28 Class 26

Due Date: 12/15/2022

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property Along SRV

Account 356 Route Number: 4

Net Amount Due: 229.61

Pay Gross Amount after Due Date

Gross Amount Due: 236.05

Service	Meter Reading Present	Previous	Usage	Charges
Water	0	0	0	150.00
Sales Tax				9.45

Meter Read: Month 11 Day 28 Class 25

Due Date: 12/15/2022

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: Riser Room

Account 357 Route Number: 4

Net Amount Due: 159.45

Pay Gross Amount after Due Date

Gross Amount Due: 164.84

Service	Meter Reading Present	Previous	Usage	Charges
	500	500	0	

Meter Read: Month 11 Day 28 Class 27

Due Date: 12/15/2022

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property along Srv

Account 358 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Group Billing Invoice 32

Service	Meter Reading Present	Previous	Usage	Charges
Water	261400	261300	100	0.16
Sales Tax				0.01

	Meter Read Month	Day	Class
Due Date: 12/15/2022	11	28	27

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property along Srv

Account 359 Route Number: 4

Net Amount Due: 0.17

Pay Gross Amount after Due Date

Gross Amount Due: 3.17

Service	Meter Reading Present	Previous	Usage	Charges
	39400	39400	0	

	Meter Read Month	Day	Class
Due Date: 12/15/2022	11	28	27

Service From 10/26/2022 TO 11/28/2022

Customer Name:

Service Address: SEC Property along Srv

Account 360 Route Number: 4

Net Amount Due: 0.00

Pay Gross Amount after Due Date

Gross Amount Due: 3.00

Water	Late C	Muni-T	Adjust	Other	Other	Sales	Past Due
1,850.20		2.16				116.56	$0.00

Date Printed 11/29/2022

Turn your water off while brushing your teeth.

CCR is available iin the office

Total Due: $1,968.92

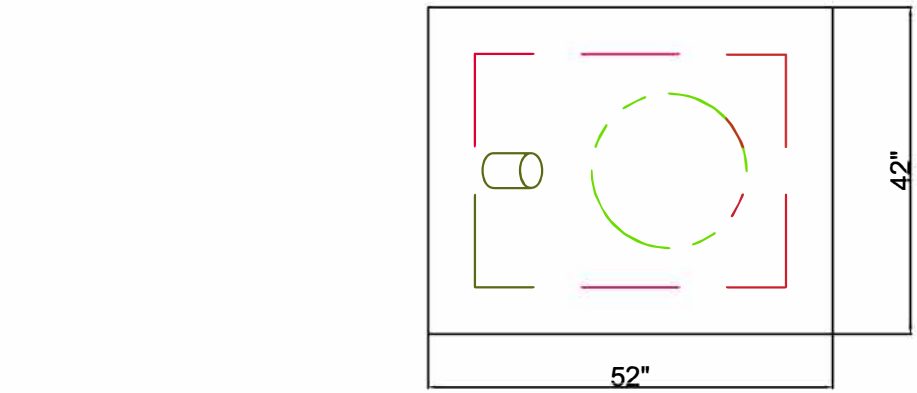
Total Due After 12/15/2022 $2,037.44

Appendix E

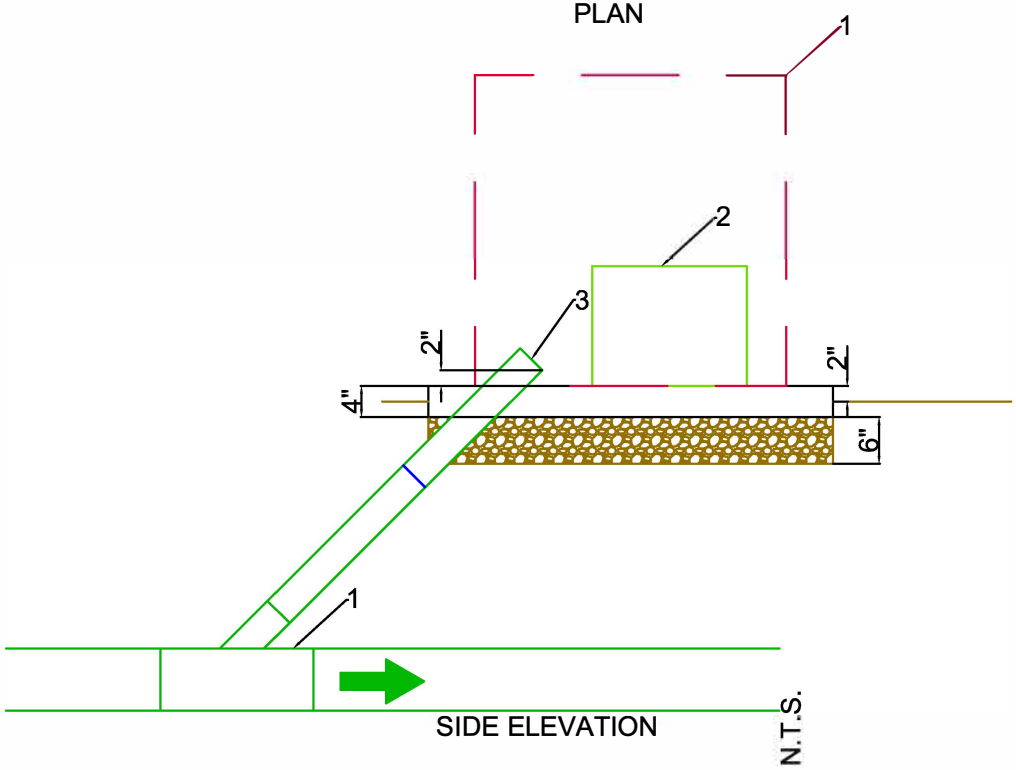
Metering Manhole and Sampling Station Details

MATERIALS LIST

1. ENCLOSURE CAGE, PRE-MANUFACTURED, AND ANCHOR BOLTED TO CONCRETE SLAB
2. MINIMUM 4" LATERAL RISER WITH REMOVABLE END CAP
3. CONCRETE BASE SLAB, CLASS 'A' CONCRETE
4. REBAR, #4 12" OC EW
5. GAVEL BASE, ABC, COMPACTED
6. CUSTOMER SERVICE LATERAL

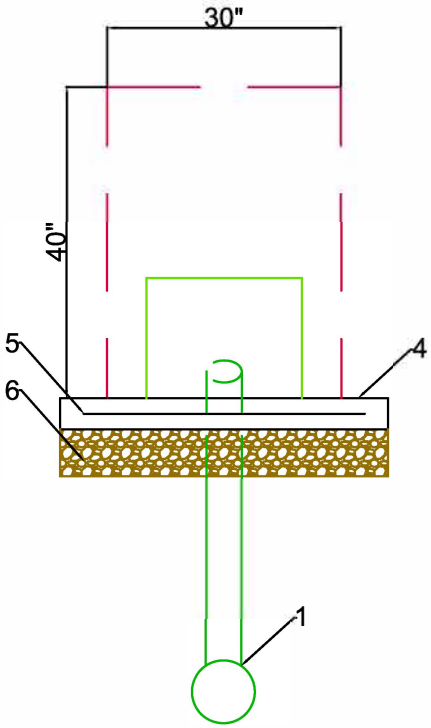


PLAN



SIDE ELEVATION

N.T.S.



END ELEVATION

Liberty Utilities℠

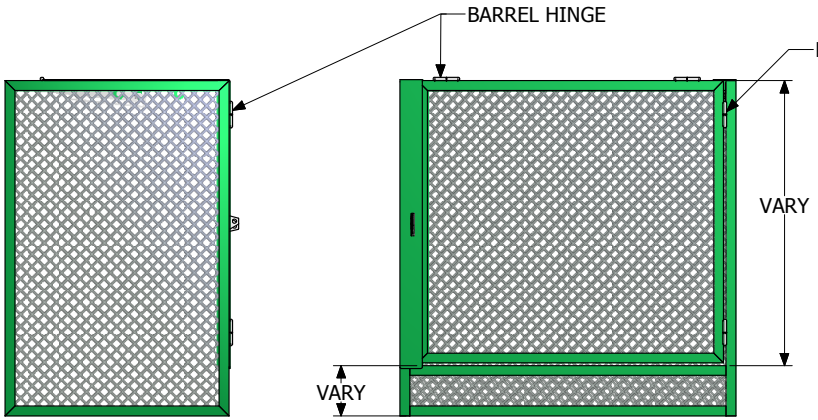
ARIZONA
LITCHFIELD PARK

WASTEWATER
SERVICE SAMPLER

Placer WATERWORKS inc.
Fabricator of Infrastructure Parts and Accessories
1325 Furneaux Road, Plumas Lakes, CA. 95961
(530) 742-9675
www.placerwaterworks.com

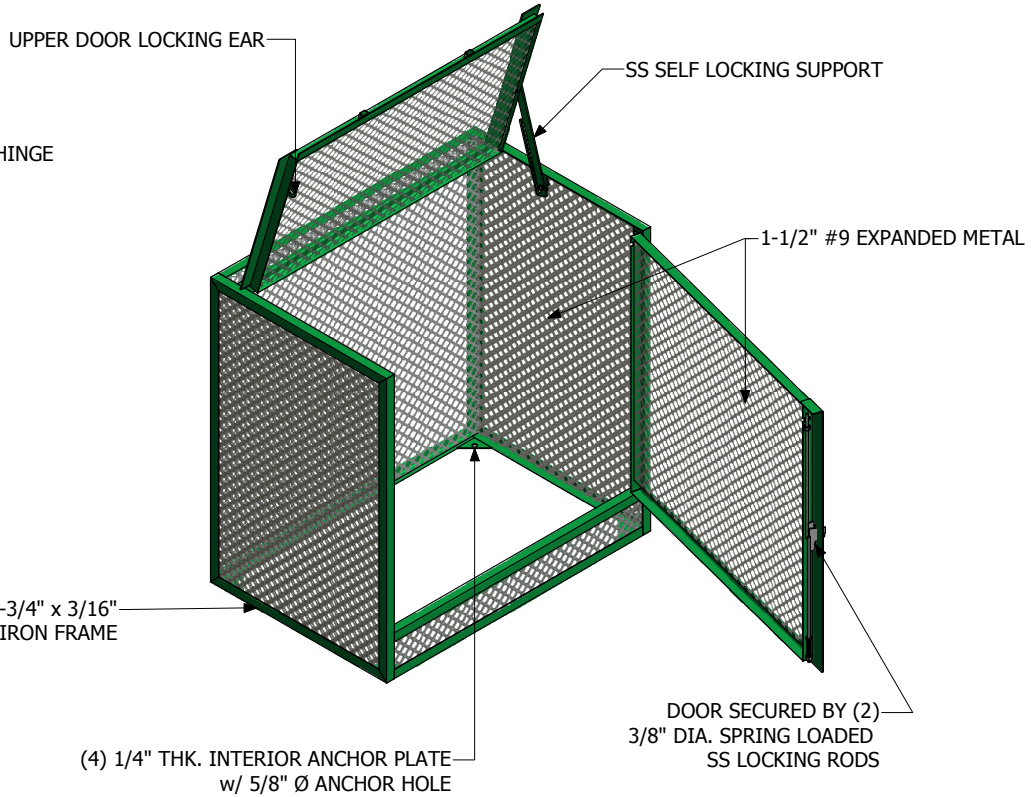
SAMPLING STATION ENCLOSURE

PW/ FT



SIDE VIEW

FRONT VIEW



NOTES:
1. ENCLOSURE TYPE: FT : TWO DOOR BACKFLOW ENCLOSURE
2. FRAME MATERIAL: 1-3/4" X 1-3/4" X 3/16" ANGLE IRON
3. EXPANDED METAL SCREEN IS NO.9 W/ 1-1/2" WELDED EVERY 6"
4. BOTH DOORS HAVE WELDED BARREL HINGE
5. UPPER DOOR HAS OPEN POSITION SELF LOCKING SUPPORT
6. UPPER DOOR ACCESS IS OBTAINED BY REMOVAL OF 3/8" BOLT FROM THE INTERIOR OF ENCLOSURE
7. (4) FOUNDATION ANCHOR PLATES W/ 5/8" DIA. HOLE
8. ALL PARTS TO BE SAND BLASTED TO SSPC-5 THK W/ METAL BLAST, W/ A 3-4 MILS ANGULAR PROFILE
9. POWDER COATED HUNTER GREEN TO 3 MILS THICKNESS AFTER FABRICATION
10. SINGLE PADLOCK SECURES TWO SPRING LOADED SST LOCKING RODS.
11. ALL WELDING DONE PER AWS SPECIFICATIONS.
12. CUSTOM SIZE AVAILABLE.

CAT#: PW/FT - BACKFLOW ENCLOSURE TWO DOOR

ALL MEASUREMENT STATED ARE INSIDE MEASUREMENT			
CAT. #	WIDTH (DOOR)	LENGTH	HEIGHT
PW/ FT - S	30"	40"	40"
PW/FT - M	40"	50"	50"
PW/FT - L	50"	60"	60"

CB: R.V. 08-03-2015 REV.02

Wall-Mount Type 4X Enclosure,W/ Back Panel 30x24x12

Features

- Includes Powder Coated Back Panel
- Ships in 5 Days
- All 316 Stainless Steel Hardware
- #4 Brushed finish
- Collar Mounting Studs for back panels
- Ground Studs provided on the interior of the enclosure and door
- UL Listed per UL File Number E130533/IP66
- Internal Print Pocket (ships loose)

0

DESIGNABOX™ CUSTOMIZE

DESIGNABOX™, the innovative online productivity tool from Nema Enclosures. It allows you to take charge in customizing a standard enclosure, from junction boxes to freestanding, to meet your exact job requirements. DESIGNABOX™ integrates seamlessly into our proprietary manufacturing process which allows us to reach the fastest delivery of custom enclosures on the market. DESIGNABOX™doesn't require AutoCAD or SOLIDWORKS software to use simply an internet connection. In Beta. Patent Pending.

DOWNLOAD STEP (/MEDIA/FILES/STEP/N30H2412SS6WP.STEP) DOWNLOAD PDF (/MEDIA/FILES/PDF/N30H2412SS6WP%203D.PDF) DOWNLOAD DXF (/MEDIA/FILES/DXF/N30H2412SS6WP%20

Notes:

For Internet Explorer, right-click and choose "Save Target As..." to download the STEP and DXF files.

PDFs downloaded in Google Chrome or Firefox must be opened using Adobe Acrobat. Opening the PD in Google Chrome or Firefox browser windows disables the 3D functionality.

Contact us for better volume pricing and lead time on quantities of 10 or more.

Specifications | Features

SKU	N30H2412SS6WP
Weight (lbs.)	77.0000

MANHOLES

TRACOI'

Complete Packaged Flow Monitoring Systems

TRACOM packaged metering manholes (PMMs) offer a complete solution for flow monitoring in municipal and industrial applications. Constructed of fiberglass reinforced plastic (FRP}, TRACOM metering manholes are lightweight, corrosion resistant, watertight, structurally strong, and built to meet the latest revision of ASTM D-3753 "Standard Specifications for Fiberglass Manholes."

Each packaged metering manhole consists of:

- Flume (Parshall, Palmer-Bowlus, Trapezoidal, HS/H-type, Cutthroat, or Montana style) for ISCO laser flow meter for flowmeasurement
- Integral cover: Dome top, H-20 reducer, or Aluminum hatch
- End adapters with pipe stubs or FRP flanges
- OHSA compliant, stainless steel reinforced FRP ladder

The lightweight nature of fiberglass (typically 1/10th the weight of concrete) minimizes the equipment necessary to install the unit. Also, each manhole is glassed together to provide a single watertight structure; there are no joints or seals to leak or allow infiltration into the manhole - allowing industries to pay only the amount of their actual effluent.

Standard Features

Integral cover
Barrel with exterior gel coat and smooth interior surface
Flume / ISO laser flow meter/ screenings structure
Pipe stub or flange end connections
Integral watertight fiberglass floor
Anti-flotation base mounting flange
Stainless steel reinforced, FRP ladder with photoluminescent, non-slip grit coated rungs
OSHA approved confined space entry sign
2" NPTtap
1/2" thick foam leveling pad
All stainless steel hardware

Standard Equipment

- 60"

Three top styles to fit your application needs

- H-20 reducer (road and parking lot areas)

Electrical Packages:

- Lights, fans, and GFCI outlets

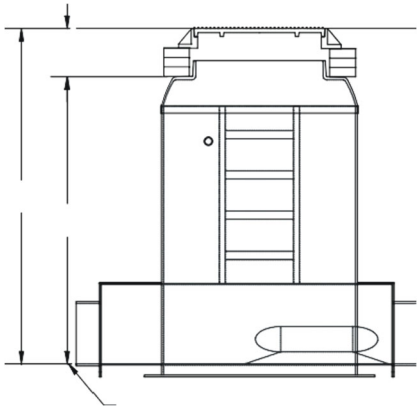
Intermediate grating platforms
Equipment shelves and mounting panels

TRACOM INC.

Toll Free (877) 4-FLUMES

(770) 664-6513 (V) (770) 664-6565 (F)

DOCUMENT: MH-AG REVISION: 0 DATE: 2-7-04 BY: JON WACHTER



	H-20 Highway Loading The manhole height is the invert to surface grade depth minus 1'-0" (typically). The 1'-0"allows for concrete grade ring(s), a frame, and a cover (all by others) to finish the installation.	

DO NOT INSTALL LADDER

Install 4 port holes for power/remote cables

Enclosure Type	Wall Mount
Enclosure Material	316 Stainless Steel
Enclosure Feature	Continuous Hinge Clamp Style
Door	Single Door
Height	30
Width	24
Depth	12
Nema Rating	4X
IP Rating	N/A
Back Panel	Carbon Steel
2D CAD Drawing	N30H2412SS6WP DXF
3D PDF Drawing	N30H2412SS6WP 3D
3D Step Drawing	N30H2412SS6WP.STEP

CONSTRUCTION NOTES:

1. MOUNTING DETAILS SHOWN ARE BASED ONLY ON CONDITIONS OBSERVED FROM ABOVE AND OUTSIDE THE MANHOLE. THEY ARE NOT BASED UPON FIELD SURVEY INFORMATION NOR UPON SEWER RECORD DRAWINGS.

2. CONTRACTOR SHALL PERFORM THE FOLLOWING PRIOR TO FABRICATION:

   A. IDENTIFY ALL AREAS WITHIN THE MANHOLE EXHIBITING DETERIORATED CONCRETE, AND REPORT TO ENGINEER. UPON ENGINEER'S APPROVAL, REMOVE DETERIORATED CONCRETE MATERIAL BACK TO SOUND CONCRETE. IF EXTENT OF REMOVAL WILL CAUSE OR REQUIRE UNDERMINING OF SOUND STRUCTURES TO REMAIN, NOTIFY ENGINEER AT ONCE.

   B. IF NO REPAIRS ARE REQUIRED, SKIP ITEMS C AND D, AND PROCEED TO ITEM E.

   C. SUBMIT CONCRETE REPAIR PROCEDURES AND MATERIALS FOR APPROVAL AFTER EXTENT OF CONCRETE DAMAGE TO BE REPAIRED IS DETERMINED. INCLUDE LINING OR COATING REPAIR MATERIALS AND DETAILS.

   D. COMPLETE REMOVAL AND REPAIR OF DETERIORATED CONCRETE, INCLUDING LINING OR COATING REPAIR.

   E. PERFORM DIMENSIONAL SURVEY OF THE MANHOLE INTERIOR.

   F. BASED UPON THE DIMENSIONAL SURVEY, PREPARE SENSOR UNIT INSTALLATION DRAWINGS FOR EACH METER AND SUBMIT TO THE ENGINEER FOR REVIEW.

   G. SENSOR UNIT INSTALLATION DRAWINGS SHALL BE FULLY DIMENSIONED AND INCLUDE A CROSS SECTION OF MANHOLE THROUGH CENTER LINE OF SEWER PIPE SHOWING MANHOLE DIMENSIONS, PIPE SIZE, PIPE OPENINGS, LOCATION OF SENSOR UNIT, LOCATION AND DIMENSIONS OF SENSOR UNIT SUPPORT INCLUDING ANCHORS, AND LOCATION OF TETHER ANCHOR TO MANHOLE. INCLUDE LINING OR COATING REPAIR MATERIALS AND DETAILS.

   H. SUBMIT SENSOR UNIT SUPPORT AND TETHER ASSEMBLY MATERIAL AND PRODUCT DATA TO ENGINEER FOR REVIEW.

3. IF THE SENSOR UNIT SUPPORT DETAIL DOES NOT SUIT EXISTING CONDITIONS FOUND, SUBMIT REQUEST FOR INFORMATION TO THE ENGINEER INCLUDING DRAWINGS SHOWING MANHOLE AND SEWER PIPE DIMENSIONS IN SUFFICIENT DETAIL FOR THE ENGINEER TO DEVELOP FIELD INSTALLATION SKETCHES.

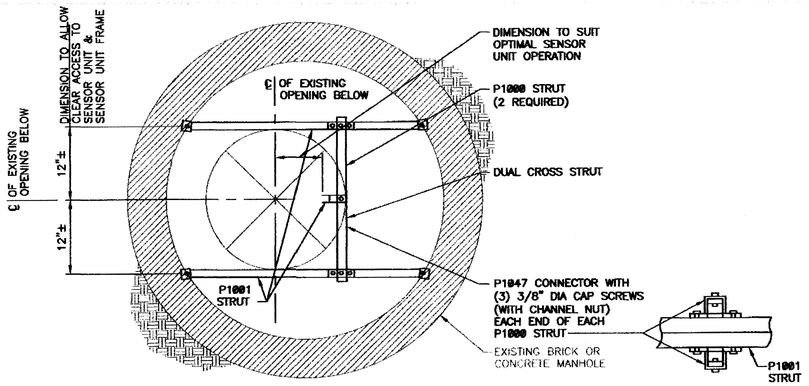
4. ALL TETHER AND SUPPORT PARTS, HARDWARE, AND ANCHORS SHALL BE TYPE 316 STAINLESS STEEL.

5. ADHESIVE ANCHORS SHALL BE HILTI HY-150 WITH TYPE 316 STAINLESS STEEL ROD AND HARDWARE. INSTALL PER MANUFACTURER'S REQUIREMENTS AND ICBO REPORT #5193, OR APPROVED ICBO REPORT. DRILLED HOLES SHALL BE CLEANED USING WIRE BRUSH AND COMPRESSED AIR AS REQUIRED TO REMOVE PARTICULATE DEBRIS AND TO ACHIEVE A DUST-FREE SURFACE.

6. REPAIR ANY MANHOLE LINING OR COATING MATERIAL DISTURBED BY CONSTRUCTION. RESTORE TO MATCH ORIGINAL UNDISTURBED CONDITION.

7. INSTALL NEW PVC LINER OR EQUIVALENT PROTECTIVE COATING WHERE SHOWN ON THE DRAWINGS AND WHERE REQUIRED AS A RESULT OF THE REVIEW AND REPAIR OF DETERIORATED CONCRETE CONDITIONS.

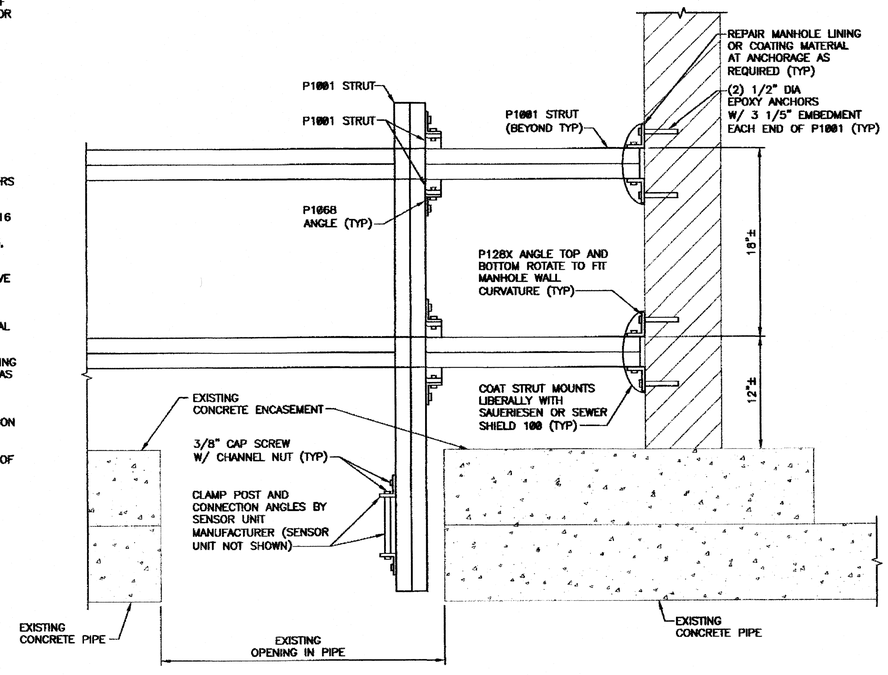
8. COLD-FORMED STAINLESS STEEL CHANNELS AND CONNECTION BRACKETS ARE DESIGNED BY "UNISTRUT" PART NUMBERS. PROVIDE TYPE 316 STAINLESS STEEL MATERIAL HAVING EQUIVALENT THICKNESS, SECTION MODULUS, AND MOMENT OF INERTIA TO THE "UNISTRUT" PARTS NOTED.



PLAN

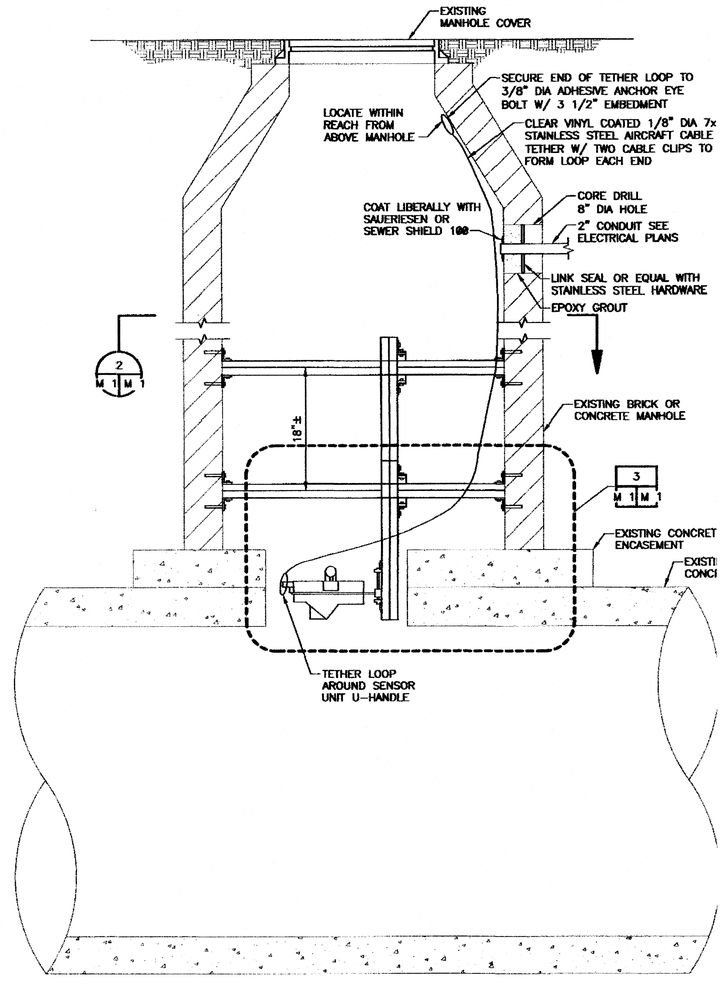
SECTION 2 M 1 M 1

NOT TO SCALE



DETAIL 3 M 1 M 1

NOT TO SCALE



TYPICAL FLOW METER SENSOR UNIT SUPPORT DETAIL

DETAIL 1 M 1 M 1

NOT TO SCALE

A FLOW METER MOUNTING DETAIL

N.T.S.

LaserFlow®
Non-Contact Subsurface Velocity Sensor

The LaserFlow® velocity sensor remotely measures flow in open channels with non-contact Laser Doppler Velocity technology and non-contact Ultrasonic level technology. The sensor uses advanced technology to measure velocity with a laser beam at single or multiple points below the surface of the wastewater stream.

The only non-contact flow measurement device to read below the surface.

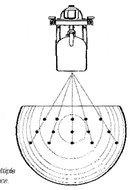
The sensor uses an ultrasonic level sensor to measure the level and determines a sub-surface point to measure velocity. The sensor then focuses its laser beam at this point and measures the frequency shift of the returned light.

The LaserFlow is ideal for a broad range of wastewater monitoring applications. It is compatible with both the Teledyne ISCO Signature® Flow Meter and the 2160 LaserFlow Module, depending on the type of installation.

During submerged conditions, flow measurement continues without interruption with optional continuous wave Doppler Ultrasonic Area Velocity technology.

With its specially designed mounting bracket in place, the LaserFlow can be deployed and removed from street level. This avoids the risk and expense of confined space entry. A variety of communication options enable programming and data retrieval from a remote location. Information about data quality can be recorded and transmitted with the flow data.

Additionally, built-in diagnostic tools simplify installation, maintenance, and advanced communication options reduce site visits.



The LaserFlow device can be programmed to take velocity measurements at single or multiple points below the meter's surface.

LaserFlow™

Applications:

- Permanent and portable flow measurement for CSO, SSO, I&I, SSEs, CMOM, and other sewer monitoring programs
- Wastewater treatment plant influent, process, and effluent flow measurement
- Industrial process and discharge flow measurement
- Stormwater conveyance and outfall
- Irrigation canals and channels
- Shallow flow measurement in varying pipe sizes

Standard Features:

- Non-contact velocity and level measurement
- Single or multiple point measurement below the liquid surface
- Rugged, submersible enclosure with IP68 ingress protection
- Zero deadband from measurement point in non-contact level and velocity measurements
- Quality readings without manual profiling
- Bidirectional velocity measurement

ISCO

TELEDYNE ISCO
Everywhereyoulook™

LaserFlow® Sensor

Size (H x W x D):	14.96 x 10.3 x 22.32 in (38.01 x 26.21 x 56.7 cm)
Weight:	8.7 kg (19.2 lbs)
Materials:	Conductive Carbon Filled ABS, SST, Conductive Kynar™, Anodized Aluminum, UV Rated PVC
Cable Lengths:	32 ft or 75.5 ft. (10 or 23 m)[3]
Enclosure:	IP68
Certifications:	CE EN61326; FDA CDRH 21CFR1040; IEC 60825-1
Laser Class:	Class 3R
Temperature Range:	Operating: -4 to 140 °F (-20 to 60 °C) Storage: -40 to 140 °F (-40 to 60 °C)
Power Required:	Input voltage: 8 to 26 VDC 12 VDC Nominal
Flow Accuracy:	±4% of reading
Communication Protocol:	TIENet™

Velocity

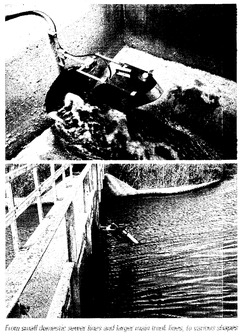
Technology:	Non-Contact, Subsurface Laser Doppler Velocity (patented)
Measurement Range:	-15 ft/s to 15 ft/s (-4.6 m/s to 4.6 m/s)
Maximum distance from liquid surface to bottom of sensor:	10 ft (3 m)
Minimum depth:	0.5 in (0.01 m)[4]
Direction:	Selectable Bidirectional Measurement[5]
Accuracy:	±0.5% of reading 0.1 ft/s (±0.03 m/s)
Minimum Velocity:	0.5 ft/s (0.15 m/s)

Level

Technology:	Non-Contact Ultrasonic
Measurement Range:	0 to 10 ft (0 to 3 m) from measurement point
Accuracy @ 72 °F (22 °C)	0.02 ft (±0.006 m) at <1 ft level change 0.04 ft (±0.012 m) at >1 ft level change
Temperature Coefficient within compensated range:	+ 0.0002 x D (m) per degree C + 0.0001 x D (ft) per degree F (D = Distance from transducer to liquid surface)
Beam Angle:	10° (5° from center line)
Ultrasonic Signal:	50 kHz
Deadband:	Zero deadband from bottom of LaserFlow sensor[6]

Options and Accessories

- Flow measurement during submerged conditions via Ultrasonic Doppler technology
- Redundant flow measurement with simultaneous Continuous Wave Doppler or Ultrasonic Level Sensing
- Permanent and temporary mounting hardware
- Sensor retrieval arm enables installation and removal without confined space entry
- Remote ultrasonic level sensor options for drop manhole and outfall applications



From small diameter sewer lines and larger open trunk lines, to narrow shapes of open channels, the sensor adjusts the velocity measurement point based on changing flow conditions and provides valuable flow data.

[1] Kynar® is a registered trademark of Arkema, Inc.
[2] Custom cable lengths also available
[3] Under normal flow conditions.
[4] Turbidity > 70 NTU. Distance < 48 inches.
[5] Deadband for remote TIENet™ 700 ultrasonic level sensor varies depending on the type of mounting hardware.

Teledyne ISCO
P.O. Box 82531, Lincoln, Nebraska, 68501 USA
Toll-free: (800) 228-4373 • Phone: (402) 464-0231 • Fax: (402) 465-3091
teledyneisco.com

L-2153 Rev 3.0
06/19

B **LASERFLOW NON-CONTACT SUBSURFACE VELOCITY SENSOR**
N.T.S.

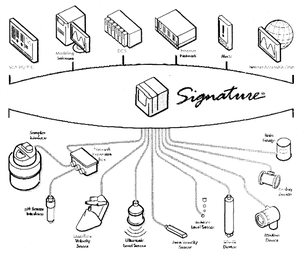
Signature®
Flowmeter

The Signature flowmeter is designed for open channel flow monitoring applications. It supports flow measurement technologies including bubbler, non-contact laser area velocity, submerged Doppler ultrasonic area velocity, and ultrasonic.

A highly flexible monitoring platform, adapting right along with your current need and any future changes in your monitoring requirements.

The meter can calculate flow using standard open channel level-to-flow and area velocity conversions, as well as user defined equations, level to area data points, or level to flow data points, depending on the application needed.

The Signature flowmeter has unique features to verify data integrity. It logs key events such as changes in calibration and power outages to validate data accuracy. Data can be easily reviewed to detect any type of data alteration. With multiple smart interface options and multi-parameter logging (such as pH), the Signature flowmeter provides a common platform for control, action, reporting, and communication.



Signature®

Applications:

- Industrial pretreatment compliance
- Shallow flow measurement in large and small pipes
- Permit enforcement
- Wastewater treatment plants
- Outfall
- Stormwater monitoring

Standard Features

- Multiple parameter data logging
- Program and summary reports
- Triggering, sampler enabling
- Compatibility with Flowlink® software
- Load calculation
- Add, subtract average multiple inputs

ISCO

TELEDYNE ISCO
Everywhereyoulook™

Flowlink® Data Analysis
Teledyne ISCO Flowlink® software is a powerful tool for analyzing flow and water quality data. It provides site setup and data retrieval/analysis, as well as advanced reporting and graphing. Flowlink software also gives you the ability to generate site data graphing and reports.

Remote Communication
Remote communication options allow meter configuration and data/report retrieval from remote locations. They also enable the transfer of data to a dedicated server running Flowlink Pro software.

USB Connectivity
With a USB flash drive attached, you can quickly update firmware in the Signature flowmeter and connected TIENet® devices, and download data files for use with Flowlink software. In addition, the USB port provides direct serial connection with a computer running Flowlink software.

Data Integrity
Data integrity is ensured by logging event data types that can be verified, thereby producing confidence with verifiable data including: Summary, Diagnostic, Program, History and Verify Report files.

Signature Flow Meter

Size (HxWxD):	8.66 x 12.22 x 8.22 in (with mounting bracket) 16.74 x 13.58 x 10.48 in (with stand)
Materials:	PPO Polyphenylene Oxide
Enclosure:	IP66 (self certified)
Power Required:	100 to 240 VAC 50/60 Hz 12V DC, Lead Acid Battery 12V DC (current consumption varies depending upon configuration)
Cable Entry:	Standard: ¾" NPT conduit Optional: ½" NPT cord grips
Flow Measurement Technologies:	Ultrasonic (TIENet 310) Bubbler (TIENet 330) Area Velocity (TIENet 350, 360)
Inputs:	Two SDI-12, Two MODBUS ASCII/RTU, pH Measurement (TIENet 301) Analog In (TIENet 302), Rain In
Setup:	Front Panel Keypad Flowlink Software with serial USB, remote cellular, or Ethernet
Flow Conversions:	Area Velocity, Weir, Flume, British Flume, Metering Insert, Manning Formula, Equation, Level to Flow Data, Points, Level to Area Data Points
Data Storage:	Non-volatile flash retains stored data during program updates. Capacity: 8M Interval: 15 or 30 seconds; 1, 2, 5, 15, or 30 minutes; or 1, 2, 4, 12, or 24 hours Capacity: 168 days with 5 parameters logged at 1 minute intervals, reports once per day
Data Retrieval:	USB drive, Flowlink Software with serial USB, remote cellular, or Ethernet
Outputs:	MODBUS ASCII/RTU, Analog (TIENet 330), Contact Output (TIENet 304), SMS Alarm
Sampler Interface:	TIENet 306

Input Options

- Multiple simultaneous flow technologies
- pH and temperature
- SDI-12
- RS-485 Modbus
- Rain gauge
- Analog (optional TIENet® 302 card)

Output Options

- RS-485 Modbus
- Analog (optional TIENet® 306 card)
- Contact (optional TIENet® 304 card)

Available Measurement Technologies

- Bubbler and Ultrasonic
- Non-Contact Laser Velocity
- Continuous Wave Area Velocity

Teledyne ISCO
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L-2151 Rev 2.0
9/18

C **SIGNATURE FLOWMETER**
N.T.S.

Exhibit 6A

Engineering Estimate of Project Costs

Exhibit C: Cost Estimate

Prepared By: EPS Group
Project Name: Luke Field - Shared Infrastructure Improvements
EPS Project No.: 22-0186

Total Phase Cost	
$	3,068,481.44

Description		Unit Price	Unit		Quantity		Cost
Fees & Permits							
Permit Fee		3.5%	%	$	2,772,685.00	$	97,043.98
Dust Control Permit	$	2,500.00	%		3.00	$	7,500.00
Bond Cost		1.25%	%	$	2,772,685.00	$	34,658.56
State & County Sales Tax		4.75%	%	$	2,772,685.00	$	131,563.90
Soils Testing Streets	$	2.00	%		12,515.00	$	25,030.00
					Subtotal:	$	295,796.44
Demolition							
Sawcut & Remove Existing Pavement	$	15.00	SY		10,213	$	153,195.00
					Subtotal:	$	153,195.00
Sewer - Offsite Phase 1							
8" HDPE (DR 11) Force Main	$	80.00	LF		9,133	$	730,640.00
15" PVC (SDR-26) Sewer Line	$	250.00	LF		3,382	$	845,500.00
5' Sewer Manhole; MAG 420	$	18,500.00	EA		9	$	166,500.00
Hydro Vac/Camera/Test	$	3.00	LF		12,515	$	37,545.00
Dysart Drain Crossing Complete	$	91,500.00	LS			$	91,500.00
Traffic Control	$	150,000.00	LS		1	$	150,000.00
Mobilization	$	30,000.00	LS		1	$	30,000.00
					Subtotal:	$	2,051,685.00
Paving							
4" AC/ 15" ABC	$	85.00	SY		6,643	$	564,655.00
Pavement Adjustment; MAG 270, 422	$	350.00	EA		9	$	3,150.00
					Subtotal:	$	567,805.00
					Construction Total:	$	2,772,685.00
					Total:	$	3,068,481.44

Exhibit 6B

Engineering Estimate of Project Costs

Exhibit C: Cost Estimate

Prepared By: EPS Group
Project Name: Luke Field - Onsite
EPS Project No.: 22-0186

Total Phase Cost	
$	645,637.17

Description		Unit Price	Unit		Quantity		Cost
Fees & Permits							
Permit Fee		3.5%	%	$	584,541.00	$	20,458.94
Dust Control Permit	$	2,500.00	%		1.00	$	2,500.00
Bond Cost		1.25%	%	$	584,541.00	$	7,306.76
State & County Sales Tax		4.75%	%	$	584,541.00	$	27,736.47
Soils Testing Streets	$	2.00	%		1,547.00	$	3,094.00
					Subtotal:	$	61,096.17
Sewer - Onsite							
8" PVC (SDR-35) Sewer Line	$	200.00	LF		1,547	$	309,400.00
5' Sewer Manhole; MAG 420	$	18,500.00	EA		7	$	129,500.00
Hydro Vac/Camera/Test	$	3.00	LF		1,547	$	4,641.00
Metering Manhole	$	35,000.00	EA		3	$	105,000.00
Sampling Station	$	7,000.00	EA		3	$	21,000.00
Mobilization	$	15,000.00	LS		1	$	15,000.00
					Subtotal:	$	584,541.00
					Construction Total:	$	584,541.00
					Total:	$	645,637.17

Exhibit 7

Liberty Litchfield Park's Tariff Rate Schedules

TABLE OF CONTENTS

APPROVED FOR FILING
DECISION NO. 76799

Applies to all **WATER** service areas
PART ONE
STATEMENT OF CHARGES

I. RATES

In Decision No. XXXXX, dated XXXXX, 2018, the Commission authorized the following rates and charges to become effective August 1, 2018:

A. Monthly Minimum Charge

RESIDENTIAL (includes multi-family)

Meter Size	Minimum Charge[1] Per Month
5/8" x 3/4" Meter	$ 12.54
3/4" Meter	12.54
1" Meter	28.22
1 1/2" Meter	62.70
2" Meter	100.32
3" Meter	200.64
4" Meter	313.50
6" Meter	627.00
8" Meter	1,003.20
10" Meter	1,442.10
12" Meter	2,696.10

[1] Low Income Tariff – A 30% discount is available on monthly minimum and commodity charges to qualified residential customers meeting the low income qualifications.

ISSUED BY:
Matthew Garlick, President
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392
Decision No. XXXXX

Applies to all **WATER** service areas
PART ONE
STATEMENT OF CHARGES

COMMERCIAL/NON-RESIDENTIAL

Meter Size	Minimum Charge Per Month
5/8" x 3/4" Meter	$ 12.54
3/4" Meter	12.54
1" Meter	31.35
1 1/2" Meter	62.70
2" Meter	100.32
3" Meter	200.64
4" Meter	313.50
6" Meter	627.00
8" Meter	1,003.20
10" Meter	1,442.10
12" Meter	2,696.10

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Applies to all **WATER** service areas

PART ONE

STATEMENT OF CHARGES

IRRIGATION

Meter Size	Minimum Charge Per Month
5/8" x 3/4" Meter	$ 12.54
3/4" Meter	12.54
1" Meter	31.35
1 1/2" Meter	62.70
2" Meter	100.32
3" Meter	200.64
4" Meter	313.50
6" Meter	627.00
8" Meter	1,003.20
10" Meter	1,442.10
12" Meter	2,696.10

Bulk Water Resale	Minimum Charge Per Month
4" Meter[2]	$ 169.29
6" Meter	338.58
8" Meter	543.61
10" Meter	778.73
12" Meter	1,455.89

[2] Bulk service is limited to customers outside the CC&N.

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DECISION NO. 76799

Applies to all **WATER** service areas

PART ONE

STATEMENT OF CHARGES

Construction Hydrants	**Minimum Charge Per Month**
Construction Hydrants	$50.00

Fire Service Lines	**Minimum Charge Per Month**
Fire Service Lines	By Meter Size*

* Liberty Litchfield Park will charge the monthly meter charge associated with the meter size.

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DECISION NO. 76799

Applies to all **WATER** service areas
PART ONE
STATEMENT OF CHARGES

B. Commodity Rates

The rate for use in addition to the minimum stated above shall be at the following rates per 1,000 gallons:

RESIDENTIAL (includes multi-family)

Meter Size	Consumption	Rate[3]
5/8" x 3/4" Meter and 3/4" Meter	0 to 3,000	$0.7091
	3,001 to 10,000	1.8437
	10,001 to 20,000	2.8437
	Over 20,000	3.2676
1" Meter	0 to 5,000	0.7091
	5,001 to 19,000	1.8437
	19,001 to 30,000	2.8437
	Over 30,000	3.2676
1 1/2" Meter	0 to 40,000	1.8437
	Over 40,000	3.2676
2" Meter	0 to 60,000	1.8437
	Over 60,000	3.2676
3" Meter	0 to 120,000	1.8437
	Over 120,000	3.2676
4" Meter	0 to 180,000	1.8437
	Over 180,000	3.2676
6" Meter	0 to 360,000	1.8437
	Over 360,000	3.2676
8" Meter	0 to 650,000	1.8437
	Over 650,000	3.2676
10" Meter	0 to 940,000	1.8437
	Over 940,000	3.2676
12" Meter	0 to 1,248,000	1.8437
	Over 1,248,000	3.2676

[3] Low Income Tariff – A 30% discount is available on monthly minimum and commodity charges to qualified residential customers meeting the low income qualifications.

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DECISION NO. 76799

Applies to all **WATER** service areas
PART ONE
STATEMENT OF CHARGES

COMMERCIAL/NON-RESIDENTIAL

Meter Size	Consumption	Rate
5/8" x 3/4" and 3/4" Meter	0 to 9,000	$1.8437
	Over 9,000	3.2676
1" Meter	0 to 20,000	1.8437
	Over 20,000	3.2676
1 1/2" Meter	0 to 40,000	1.8437
	Over 40,000	3.2676
2" Meter	0 to 60,000	1.8437
	Over 60,000	3.2676
3" Meter	0 to 120,000	1.8437
	Over 120,000	3.2676
4" Meter	0 to 180,000	1.8437
	Over 180,000	3.2676
6" Meter	0 to 360,000	1.8437
	Over 360,000	3.2676
8" Meter	0 to 650,000	1.8437
	Over 650,000	3.2676
10" Meter	0 to 940,000	1.8437
	Over 940,000	3.2676
12" Meter	0 to 1,248,000	1.8437
	Over 1,248,000	3.2676

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Decision No. XXXXX

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DECISION NO. 76799

Applies to all **WATER** service areas
PART ONE
STATEMENT OF CHARGES

IRRIGATION

Meter Size	Consumption	Rate
5/8" x 3/4" and 3/4" Meter	0 to 9,000	$1.8437
	Over 9,000	3.2676
1" Meter	0 to 20,000	1.8437
	Over 20,000	3.2676
1 1/2" Meter	0 to 40,000	1.8437
	Over 40,000	3.2676
2" Meter	0 to 60,000	1.8437
	Over 60,000	3.2676
3" Meter	0 to 120,000	1.8437
	Over 120,000	3.2676
4" Meter	0 to 180,000	1.8437
	Over 180,000	3.2676
6" Meter	0 to 360,000	1.8437
	Over 360,000	3.2676
8" Meter	0 to 650,000	1.8437
	Over 650,000	3.2676
10" Meter	0 to 940,000	1.8437
	Over 940,000	3.2676
12" Meter	0 to 1,248,000	1.8437
	Over 1,248,000	3.2676

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Applies to all **WATER** service areas
PART ONE
STATEMENT OF CHARGES

BULK WATER RESALE

Meter Size	Consumption	Rate
4" Meter	All gallons	$1.5600
6" Meter	All gallons	1.5600
8" Meter	All gallons	1.5600
10" Meter	All gallons	1.5600
12" Meter	All gallons	1.5600

Construction Water	Consumption	Rate
Hydrants	All gallons	$3.2676

ISSUED BY:
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DECISION NO. 76799

Applies to all **WATER** service areas
PART ONE
STATEMENT OF CHARGES

C. Service Line and Meter Installation Charges

(Refundable Pursuant to A.A.C. R14-2-405)

Meter Size	Line	Meter	Total
5/8 x 3/4" Meter	$ 565.00	$ 158.00	$ 723.00
3/4" Meter	565.00	260.00	825.00
1" Meter	629.00	321.00	950.00
1 1/2" Meter	699.00	536.00	1,235.00
2" Turbine Meter	At Cost	At Cost	At Cost
2" Compound Meter	At Cost	At Cost	At Cost
3" Turbine Meter	At Cost	At Cost	At Cost
3" Compound Meter	At Cost	At Cost	At Cost
4" Turbine Meter	At Cost	At Cost	At Cost
4" Compound Meter	At Cost	At Cost	At Cost
6" Turbine Meter	At Cost	At Cost	At Cost
6" Compound Meter	At Cost	At Cost	At Cost
8" Meter & Larger Meters	At Cost	At Cost	At Cost

*Hydrant Meter Deposit	
3" Turbine Meter	$1,470.00
3" Compound Meter	2,265.00

* Shall have a non-interest bearing deposit of the amount indicated, refundable in its entirety upon return of the meter in good condition and payment of the final bill.

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DECISION NO. 76799

Applies to all **WATER** service areas
PART ONE
STATEMENT OF CHARGES

D. Miscellaneous Service Charges

Service	Charge
Establishment per A.A.C. R14-2-403(D)	$20.00
Re-Establishment of Service per A.A.C. R14-2-403(D)	(b)
Reconnection per A.A.C. R14-2-403(D)	$50.00
Meter Test (if correct) per A.A.C. R14-2-408(F)	$25.00
Meter Re-Read (if correct) per A.A.C. R14-2-408(C)	$5.00
Fire Hydrant Meter Relocation	$50.00
Fire Hydrant Meter Repair	At Cost
NSF Check per A.A.C. R14-2-409(F)	$25.00 (a)
Deferred Payment, Per Month	1.50%
Late Charge	(c)
Service Calls After Hours	$40.00 (d)
Deposit Requirement	(e)
Deposit Interest per A.A.C. R14-2-403(B)	6.00%
Water Hook-Up Fee	(f)

(a) Liberty Litchfield Park may charge only one NSF fee when customers are billed for water and sewer services on one bill.
(b) Minimum charge times number of full months off the system per A.A.C. R14-2-403(D).
(c) Greater of $5.00 or 1.50% of unpaid balance.
(d) Customer shall be charged for after-hours service calls outside of normal working hours for work performed at customer's request or convenience.
(e) Per A.A.C. R14-2-403(B):
Residential – two times the average bill by class according to meter size.
Commercial – two and one-half times the customer's estimated maximum monthly bill.
(f) Customers shall pay the applicable Water Hook-Up Fees per tariff.

ISSUED BY:
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DECISION NO. 76799

Applies to all **WATER** service areas
PART ONE
STATEMENT OF CHARGES

II. TAXES AND ASSESSMENTS

In addition to the collection of regular rates, the Company will collect from its customers a proportionate share of any privilege, sales, and use tax per A.A.C. R14-2-409(D)(5).

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DECISION NO. 76799

Applies to all **WATER** service areas
PART TWO
STATEMENT OF TERMS AND CONDITIONS

I. PERMITTED COSTS

A. Costs shall be verified by invoice.

B. For services that are provided by the Company at cost, costs shall include labor, materials, other charges incurred, and overhead not to exceed 10%. However, prior to any such service being provided, the estimated cost of such service will be provided by the Company to the customer. After review of the cost estimate, the customer will pay the amount of the estimated cost to the Company.

C. In the event that the actual cost is less than the estimated cost, the Company will refund the excess to the customer within 30 days after completion of the provision of the service or after Company's receipt of invoices, timesheets or other related documents, whichever is later.

D. In the event the actual cost is more than the estimated cost, the Company will bill the customer for the amount due within 30 days after completion of the provision of the service or after the Company's receipt of invoices, timesheets or other related documents, whichever is later. The amount so billed will be due and payable 30 days after the invoice date. However, if the actual cost is more than five percent (5%) greater than the total amount paid, the customer will only be required to pay five percent (5%) more than the total amount paid, unless the Company can demonstrate that the increased costs were beyond its control and could not be foreseen at the time the estimate for the total amount paid was made.

E. At the customer's request, the Company shall make available to the customer all invoices, timesheets or related documents that support the cost for providing such service.

F. Permitted costs shall include any Federal, State or local taxes that are or may be payable by the Company as a result of any tariff or contract for water facilities under which the Customer advances or contributes funds or facilities to the Company.

APPROVED FOR FILING
DECISION NO. 76799

Applies to all **WATER** service areas
PART TWO
STATEMENT OF TERMS AND CONDITIONS

II. INTERRUPTIBLE SERVICE; COMPANY'S LIABILITY LIMITATIONS

The Company will supply only such water at such pressures as may be available from time to time as a result of the normal operation of its water system. The Company will maintain a minimum water pressure of 20 p.s.i. and will not guarantee a specific gallons per minute flow rate at any public fire hydrants or fire sprinkler service. In the event service is interrupted, irregular or defective, or fails from causes beyond the Company's control or through ordinary negligence of its employees or agents, the Company will not be liable for any injuries or damages arising therefrom.

III. TERMINATION OF WATER SERVICE FOR VIOLATION OF WASTEWATER RULES AND REGULATIONS

The Company is authorized to discontinue water service to any person connected to both its water and sewer systems who violates the Company's wastewater terms and conditions or in any way creates a public health hazard or the likelihood of such a public health hazard. This termination authority also applies to non–payment for wastewater services.

IV. RULES AND REGULATIONS

The Company has adopted the Rules and Regulations established by the Commission as the basis for its operating procedures. A.A.C. R14-2-401 through A.A.C. R14-2-411 will be controlling of Company procedures, unless specific Commission Order(s) provide otherwise.

APPROVED FOR FILING
DECISION NO. 76799

Applies to all **WATER** service areas
PART THREE
CROSS-CONNECTION OR BACKFLOW TARIFF

A. PURPOSE:

The purpose of this tariff is to protect Liberty Utilities (Litchfield Park Water & Sewer) Corp. (the "Company") water from the possibility of contamination caused by backflow of contaminants that may be present on the customer's premises by requiring the installation and periodic testing of backflow-prevention assemblies pursuant to the provisions of the Arizona Administrative Code ("A.A.C.") R14-2-405.B.6. and A.A.C. R18-4-215.

B. REQUIREMENTS:

In compliance with the Rules and Regulations of the Arizona Corporation Commission ("Commission") and the Arizona Department of Environmental Quality ("ADEQ"), specifically A.A.C. R14-2-405.B.6 and A.A.C. R18-4-215 relating to backflow prevention:

1. The Company may require a customer to pay for and have installed, and to maintain, test and repair a backflow-prevention assembly if A.A.C. R18-4-215.B or C applies.

2. A backflow-prevention assembly required to be installed by the customer under Paragraph 1 of this tariff shall comply with the requirements set forth in A.A.C. R18-4-215.D and E.

3. Subject to the provisions of A.A.C. R14-2-407 and 410, and in accordance with Paragraphs 1 and 7 of this tariff, the Company may terminate service or deny service to a customer who fails to install a backflow-prevention assembly as required by this tariff.

4. The Company shall give any existing customer who is required to install a backflow-prevention assembly written notice of said requirement. If A.A.C. R14-2-410.B.1.a is **not** applicable, the customer shall be given thirty (30) days from the time such written notice is received in which to comply with this notice. If the customer can show good cause as to why he cannot install the backflow-prevention assembly within thirty (30) days, the Company or Commission Staff may suspend this requirement for a reasonable period of time.

5. Testing shall be in conformance with the requirements of A.A.C. R18-4-215.F. The Company may require the customer to pay to have the backflow-prevention assembly tested as long as the Company does not require an unreasonable number of tests.

ISSUED BY:
Matthew Garlick, President
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

Applies to all **WATER** service areas
PART THREE
CROSS-CONNECTION OR BACKFLOW TARIFF

6. The customer shall provide the Company with records of installation and testing. For each backflow-prevention assembly, these records shall include:

   a. assembly identification number and description;
   b. location;
   c. date(s) of test(s);
   d. description of repairs and recommendations for repairs made by tester;
   e. tester's name and certificate number; and
   f. tester's field test kit certification documentation.

7. In the event the backflow-prevention assembly does not function properly or fails any test, and an obvious hazard as contemplated under A.A.C. R14-2-410.B.1.a. exists, the Company may terminate service immediately and without notice. The backflow-prevention assembly shall be repaired or replaced by the customer and retested.

8. In the event the backflow-prevention assembly does not function properly or fails any test, or in the event that a customer fails to comply with the testing requirement, and A.A.C. R14-2-410.B.1.a. is **not** applicable, the backflow-prevention assembly shall be repaired or replaced within fourteen (14) days of the initial discovery of the deficiency in the assembly or its function. Failure to remedy the deficiency of dysfunction of the assembly, or failure to retest, shall be grounds for termination of water service in accordance with A.A.C. R14-2-410.

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Avondale, AZ 85392

Applies to all **WATER** service areas
PART FOUR
CURTAILMENT PLAN

ADEQ Public Water System Number: 07-046

Liberty Utilities (Litchfield Park Water & Sewer) Corp. ("Company") is authorized to curtail water service to all customers within its certified area under the terms and conditions listed in this tariff.

This curtailment plan shall become part of the Arizona Department of Environmental Quality Emergency Operations Plan for the Company.

The Company shall notify its customers of this new tariff as part of its next regularly scheduled billing after the effective date of the tariff or no later than sixty (60) days after the effective date of the tariff.

The Company shall provide a copy of the curtailment tariff to any customer, upon request.

Stage 1 Exists When:

Company is able to maintain water storage in the system at 100 percent of capacity and there are no known problems with its well production or water storage in the system.

Restrictions: Under Stage 1, the Company is deemed to be operating normally and no curtailment is necessary.

Notice Requirements: Under Stage 1, no notice is necessary.

Stage 2 Exists When:

a. Company's water storage or well production has been less than 80 percent of capacity for at least 48 consecutive hours, and

b. Company has identified issues such as a steadily declining water table, increased draw down threatening pump operations, or poor water production, creating a reasonable belief the Company will be unable to meet anticipated water demand on a sustained basis.

Restrictions: Under Stage 2, the Company may request the customers to voluntarily employ water conservation measures to reduce water consumption by approximately 50 percent. Outside watering should be limited to essential water, dividing outside watering on some uniform basis (such as even and odd days) and eliminating outside watering on weekends and holidays.

Notice Requirements: Under Stage 2, the Company is required to notify customers by delivering written notice door to door at each service address, or by United States first class mail to the billing address or, at the Company's option, both. Such notice shall notify the customers of the general nature of the problem and the need to conserve water.

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Applies to all **WATER** service areas
PART FOUR
CURTAILMENT PLAN

Stage 3 Exists When:

a. Company's total water storage or well production has been less than 50 percent of capacity for at least 24 consecutive hours, and

b. Company has identified issues such as a steadily declining water table, increased draw down threatening pump operations, or poor water production, creating a reasonable belief the Company will be unable to meet anticipated water demand on a sustained basis.

Restrictions: Under Stage 3, the Company shall request the customer to voluntarily employ water conservation measures to reduce daily consumption by approximately 50 percent. All outside watering should be eliminated, except livestock, and indoor water conservation techniques should be employed whenever possible. Standpipe service shall be suspended.

Notice Requirements:

1. Company is required to notify customers by delivering written notice to each service address, or by United States first class mail to the billing address or, at the Company's option, both. Such notice shall notify the customers of the general nature of the problem and the need to conserve water.

2. Beginning with Stage 3, the Company shall post at least two (2) signs showing the curtailment stage. Signs shall be posted at noticeable locations, like at the well sites and at the entrance to major subdivisions served by the Company.

3. The Company shall notify the Consumer Services Section of the Utilities Division of the Corporation Commission at least 12 hours prior to entering Stage 3.

Once Stage 3 has been reached, the Company must begin to augment the supply of water by either hauling or through an emergency interconnect with an approved water supply in an attempt to maintain the curtailment at a level no higher than Stage 3 until a permanent solution has been implemented.

Stage 4 Exists When:

a. Company's total water storage or well production has been less than 25 percent of capacity for at least 12 consecutive hours, and

b. Company has identified issues such as a steadily declining water table, increased draw down threatening pump operations, or poor water production, creating a reasonable belief the Company will be unable to meet anticipated water demand on a sustained basis.

ISSUED BY:
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Applies to all **WATER** service areas

PART FOUR

CURTAILMENT PLAN

Restrictions: Under Stage 4, Company shall inform the customers of a **mandatory** restriction to employ water conservation measures to reduce daily consumption. Failure to comply will result in customer disconnection. The following uses of water shall be prohibited:

- Irrigation of outdoor lawns, trees, shrubs, or any plant life is prohibited
- Washing of any vehicle is prohibited
- The use of water for dust control or any outdoor cleaning uses is prohibited
- The use of drip or misting systems of any kind is prohibited
- The filling of any swimming pool, spas, fountains or ornamental pools is prohibited
- The use of construction water is prohibited
- Restaurant patrons shall be served water only upon request
- Any other water intensive activity is prohibited

The Company's operation of its standpipe service is prohibited. The addition of new service lines and meter installations is prohibited.

Notice Requirements:

1. Company is required to notify customers by delivering written notice to each service address, or by United States first class mail to the billing address or, at the Company's option, both. Such notice shall notify the customers of the general nature of the problem and the need to conserve water.

2. Company shall post at least two (2) signs showing curtailment stage. Signs shall be posted at noticeable locations, like at the well sites and at the entrance to major subdivisions served by the Company.

3. Company shall notify the Consumer Services Section of the Utilities Division of the Corporation Commission at least 12 hours prior to entering Stage 4.

Once Stage 4 has been reached, the Company must augment the supply of water by hauling or through an emergency interconnect from an approved supply or must otherwise provide emergency drinking water for its customers until a permanent solution has been implemented.

Customers who fail to comply with the above restrictions will be given a written notice to end all outdoor use. Failure to comply within two (2) working days of receipt of the notice will result in temporary loss of service until an agreement can be made to end unauthorized use of outdoor water. To restore service, the customer shall be required to pay all authorized reconnection fees. If a customer believes he/she has been disconnected in error, the customer may contact the Commission's Consumer Services Section at 1-800-222-7000 to initiate an investigation.

Applies to all **WATER** and **WASTEWATER** service areas

PART EIGHT

ALTERNATE RATES FOR WATER AND WASTEWATER (ARWW)

DOMESTIC SERVICE - SINGLE FAMILY ACCOMMODATION

APPLICABILITY

Applicable to residential water and wastewater service for domestic use rendered to low-income households where the customer meets all the program qualifications and special conditions of this rate schedule. Acceptance into the program is subject to verification of income source.

TERRITORY

Within all customer service areas served by Liberty Utilities (Litchfield Park Water & Sewer) Corp. ("Liberty Utilities").

RATES

Thirty percent (30%) discount applied to the regular filed tariff.

PROGRAM QUALIFICATIONS

1. The Liberty Utilities bill must be in your name and the address must be your primary residence or you must be a tenant receiving water service by a sub-metered system.
2. You may not be claimed as a dependent on another person's tax return.
3. You must reapply each time you move residences.
4. You must renew your application once every two (2) years, or sooner, if requested.
5. You must recertify each year by submitting a declaration attesting to your continuing eligibility, and provide one of the following items as proof of eligibility: 1) copy of tax return from prior year (proof of gross income); or 2) copy of complete W2 form with gross income calculation from prior year; or 3) copy of welfare / current eligibility letter for food stamps (dated).
6. You must notify Liberty Utilities within thirty (30) days if you become ineligible for ARWW.
7. Your total gross annual income of all persons living in your household cannot exceed the income levels below:

ISSUED BY:
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Liberty Utilities (Litchfield Park Water & Sewer) Corp.
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Avondale, AZ 85392
Decision No. XXXXX

Applies to all **WATER** and **WASTEWATER** service areas

PART EIGHT
ALTERNATE RATES FOR WATER AND WASTEWATER (ARWW)
DOMESTIC SERVICE - SINGLE FAMILY ACCOMMODATION

Effective August 1, 2018

No. of Person in Household	Total Gross Annual Income*
1	$18,210
2	$24,690
3	$31,170
4	$37,650
5	$44,130
6	$50,610

For each additional person residing in the household, add $6,480

***Qualifying annual incomes are set at 150 percent of the 2018 federal poverty levels.**

For the purpose of the program the "gross household income" means all money and non cash benefits, available for living expenses, from all sources, both taxable and non taxable, before deductions for all people who live in your home. This includes, but is not limited to:

Wages or salaries
Interest or dividends from:
Savings account, stocks or bonds
Unemployment benefits
TANF (AFDC)
Pensions
Gifts
Social Security, SSI, SSP
Scholarships, grants, or other aid used for living expenses
Disability payments
Food Stamps
Insurance settlements
Rental or royalty income
Profit from self-employment (IRS form Schedule C, Line 29)
Worker's Compensation
Child Support
Spousal Support

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Decision No. XXXXX

Applies to all **WATER** and **WASTEWATER** service areas

PART EIGHT

ALTERNATE RATES FOR WATER AND WASTEWATER (ARWW)

DOMESTIC SERVICE - SINGLE FAMILY ACCOMMODATION

SPECIAL CONDITIONS

1. Application: An application on a form authorized by the Commission is required for each request for service under this schedule. A customer must reapply every two (2) years.

2. Recertification: A customer enrolled in the ARWW program must, each year, recertify by submitting a declaration attesting to continuing eligibility, and provide one of the following items as proof of eligibility: 1) copy of tax return from prior year (proof of gross income); or 2) copy of complete W2 form with gross income calculation from prior year; or 3) copy of welfare / current eligibility letter for food stamps (dated).

3. Commencement of Rate: Eligible customers whose applications have been approved shall be billed on this schedule commencing with the next regularly scheduled billing period that follows receipt of application by Liberty Utilities.

4. Verification: Information provided by the applicant is subject to verification by Liberty Utilities. Refusal or failure of a customer to provide documentation of eligibility acceptable to Liberty Utilities, upon request by Liberty Utilities, shall result in removal from this rate schedule.

5. Notice from Customer: It is the customer's responsibility to notify Liberty Utilities if there is a change of eligibility status.

6. Rebilling: Customers may be re-billed retroactively for periods of ineligibility under the applicable rate schedule.

7. Master-metered: A reduction will be calculated in the bill of master-metered customers, who have sub-metered tenants that meet the income eligibility criteria, so an equivalent discount (30%) can be passed through to eligible customer(s).

8. Participation Cap: The ARWW program is limited to 5,000 water division customers and 5,000 wastewater division customers. Applications will be reviewed and approved on a first come, first served basis. Applicants will be placed on a waiting list if the participation cap has been met.

APPROVED FOR FILING
DECISION NO. 76799

Applies to all **WATER** and **WASTEWATER** service areas

PART EIGHT
ALTERNATE RATES FOR WATER AND WASTEWATER (ARWW)
DOMESTIC SERVICE - SINGLE FAMILY ACCOMMODATION

RECOVERY OF COST OF LOW INCOME TARIFF AND CUSTOMER SURCHARGES

Under the terms of Company's Alternate Rates for Water and Wastewater (ARWW) Domestic Service, qualifying low-income customers receive a 30 percent discount applied to the Company's regular filed tariff rates for water and wastewater service. The cost of the ARWW tariff shall be recovered by Company from a monthly low income tariff surcharge on all residential and non-residential water and wastewater customers who are not participating in the ARWW program. Specifically, Company is entitled to seek recovery of direct costs (*i.e.*, those costs directly associated with the program, and would not be incurred in the absence of the program). Company shall account for those direct costs separately from other operating costs.

Company shall be entitled to implement a low income tariff surcharge on non-participating residential and non-residential water and wastewater customers as follows.

- For customers participating in ARWW, the Company shall maintain separate balancing accounts for water and wastewater customers detailing the beginning and ending balance of the cumulative unrecovered program costs each month.
- Company's authorized rate of return shall be applied monthly to the average of the beginning balances of the cumulative unrecovered program costs for water and wastewater service and included in the beginning balances for the following month.
- Using the separate balancing accounts for water and wastewater customers, Company shall calculate separate monthly surcharges for water and wastewater customers. The water and wastewater surcharges shall be calculated as follows:

  Water:

  (Ending Balance for Low-Income Tariff Balancing Account including amortized carrying costs during recovery period /Total gallons sold to non-participating customers)

  Wastewater:

  (Ending Balance for Low-Income Tariff Balancing Account including amortized carrying costs during recovery period/Number of active non-participating wastewater connections at year end)/12

- The ending balance in the balancing accounts shall equal the beginning balances plus discounts allowed on bills for the twelve month tracking period, plus direct program costs incurred in the twelve month period plus carrying charges less surcharge fees billed in the twelve month tracking period.
- Company shall implement monthly water and wastewater surcharges for the ARWW program for each twelve month period of the ARWW Program. Company shall calculate the monthly water and wastewater surcharges each year based on the active number of water and wastewater connections for each respective system as of December 31 of the prior year. Company shall file notice of the water and wastewater surcharges, along with a report on the ARWW Program, with the Arizona Corporation Commission on or before January 31 and the surcharges shall be implemented on customer bills in February of each year with the recovery period ending in January of the following year.

ISSUED BY:
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Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392
Decision No. XXXXX

APPROVED FOR FILING
DECISION NO. 76799

Application for Alternate Rates for Water and Wastewater (ARWW)

To qualify for Liberty Utilities ARWW please check (✓) all that apply:

- ☐ I am a Liberty Utilities residential customer and the Liberty Utilities account is in my name.
- ☐ I am a sub-metered tenant within the Liberty Utilities service area.
- ☐ My household income is at or below the income level in the listing below.

Household Size	Total Gross Annual Income from All Sources
1	$18,210
2	$24,690
3	$31,170
4	$37,650
5	$44,130
6	$50,610

For each additional person residing in the household, add $6,480.

The definition of "gross household income" (before taxes) is all money and non cash benefits available for living expenses from all sources, both taxable and non taxable, before deductions, including expenses, for all people who live in your home. **This includes, but is not limited to the following (please check (✓) all that apply):**

- ☐ Wages, salaries or profit from self-employment
- ☐ Disability and/or Workers' Compensation payments
- ☐ Insurance and/or legal settlements
- ☐ Pensions
- ☐ Spousal and/or child support
- ☐ Scholarships, grants, or other aid used for living
- ☐ Interest/dividends from: savings, stocks, bonds, or retirement accounts
- ☐ Social Security, SSI or SSP
- ☐ Food Stamps
- ☐ TANF (AFDC)
- ☐ Veterans Affairs benefits
- ☐ Unemployment benefits
- ☐ Rental and/or royalty income
- ☐ Cash, gifts and/or other income

Please print the following information. **Incomplete information will delay your discount.** The name used to apply for the discount **must** be the same as the name on the Liberty Utilities statement.

PLEASE PRINT LEGIBLY		
Liberty Utilities Account Number (As shown on statement)		
Total No. of persons living in household:	Household's Total Gross Annual Income: $	Contact Phone Number
Name as shown on Liberty Utilities statement		
Liberty Utilities Service Address		
City	State	Zip Code

Please attach one of the items listed as proof of income for eligibility verification: Copy of tax return from prior year (proof of gross income), or copy of complete W2 form with gross income calculation from prior year, or copy of welfare /current eligibility letter for food stamps (dated).

By signing below, I certify under penalty of perjury that this information is true and correct under the laws of the State of Arizona. I will provide proof of income and I will notify Liberty Utilities of any changes that affect my eligibility. I further authorize Liberty Utilities to verify source of income provided above. I understand that if I receive the discount without meeting the qualifications for it, I may be required to pay back the discount I received.

_____ _____

Customer Signature Date

Note: An Application for ARWW must be submitted every two years. A Declaration of Eligibility must be submitted annually for verification. Please allow 30-45 days for processing.

Office Use Only: Date Verified _____ Verified By _____ Expires _____

APPROVED FOR FILING

DECISION NO. 76799

Declaration of Eligibility
Alternate Rates for Water and Wastewater (ARWW)

To recertify enrollment in the ARWW Program please fill out the following attesting to continuing eligibility:

PLEASE PRINT LEGIBLY			
Name as shown on Liberty Utilities statement			
Liberty Utilities Account Number (As shown on statement)			
Liberty Utilities Service Address			
City	State	Zip Code	
Contact Phone Number	Work Phone Number		

I,

_____,
Your Name (Please Print)

Last submitted an Application for Alternative Rates (ARWW) on _____
(dd/mm/yyyy)

and hereby confirm my eligibility for the year ending _____.
(dd/mm/yyyy)

Please attach one of the items listed below as proof of income for eligibility verification:

Copy of tax return from prior year (proof of gross income); or
copy of complete W2 form with gross income calculation from prior year; or
copy of welfare /current eligibility letter for food stamps (dated).

By signing below, I certify under penalty of perjury that this information is true and correct under the laws of the State of Arizona. I will provide proof of income and I will notify Liberty Utilities of any changes that affect my eligibility. I further authorize Liberty Utilities to verify source of income provided above. I understand that if I receive the discount without meeting the qualifications for it, I may be required to pay back the discount I received.

_____ _____
Customer Signature Date

Note: An Application for ARWW must be submitted every two years. A Declaration of Eligibility must be submitted annually for verification.

ISSUED BY:
Matthew Garlick, President
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392
Decision No. XXXXX

APPROVED FOR FILING
DECISION NO. 76799

Liberty Utilities (Litchfield Park Water & Sewer) Corp.
Alternate Rates for Water and Wastewater (ARWW)

Applicability

Applicable to residential water and wastewater service for domestic use rendered to low-income households where the customer meets all the Program Qualifications and Special Conditions of this rate schedule.

Territory

Within all customer service areas served by Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Discount

Thirty percent (30%) discount applied to the regular filed tariff. The discount will be applied to the customer's total bill before any adjustments and application of any other taxes, credit, penalties or fees.

Program Qualifications

- The Liberty Utilities account must be in your name and the address must be your primary residence in our service area or you must be a tenant receiving water service by a sub-metered system.
- You may not be claimed as a dependent on another person's tax return.
- You must reapply each time you move residences.
- You must renew your application once every two (2) years or sooner if requested.
- You must recertify each year by submitting a declaration attesting to your continuing eligibility, and provide one of the following items as proof of eligibility: 1) copy of tax return from prior year (proof of gross income); or 2) copy of complete W2 form with gross income calculation from prior year; or 3) copy of welfare/current eligibility letter for food stamps (dated).
- You must notify Liberty Utilities within thirty (30) days if you become ineligible for ARWW.
- Your total gross annual income of all persons living in your household cannot exceed the income levels provided on the application.

Special Conditions

- You must fill out and sign the ARWW Application completely. Incomplete information will delay your discount. You must reapply every two (2) years.
- You must recertify your enrollment in the ARWW annually by submitting a Declaration of Eligibility and providing one of the following items as proof of eligibility: 1) copy of tax return from prior year (proof of gross income); or 2) copy of complete W2 form with gross income calculation from prior year; or 3) copy of welfare/current eligibility letter for food stamps (dated).
- Customers shall be billed on this schedule commencing with the next regularly scheduled billing period that follows the receipt and approval of the application by Liberty Utilities.
- Documentation of your gross annual income must be provided to Liberty Utilities for verification of eligibility for ARWW. Refusal or failure to provide documentation of acceptable eligibility to Liberty Utilities shall result in removal from this rate schedule.
- It is the customer's responsibility to notify Liberty Utilities if there is a change in eligibility status.
- You may be re-billed for any periods of ineligibility under the applicable rate schedule.
- Master-metered customers who have sub-metered tenants will receive a reduction in the billing. Sub-metered tenants must qualify and meet the income eligibility criteria so an equivalent discount (30%) can be passed through to eligible customer(s).
- The ARWW program is limited to 5,000 water division customers and 5,000 wastewater division customers.

How to Submit Completed ARWW Application and/or Declaration of Eligibility
Mail, Fax or Email your ARWW Application and Declaration of Eligibility to:
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Rd. Ste. D101
Avondale, AZ 85392
Fax: 623-935-1020
Email: customerserviceavondale@libertywater.com

APPROVED FOR FILING
DECISION NO. 76799

PART NINE
HOOK-UP FEE TARIFF

WATER HOOK-UP FEE

I. Purpose and Applicability

The purpose of the off-site hook-up fees payable to Liberty Utilities (Litchfield Park Water & Sewer) Corp. (the "Company") pursuant to this tariff is to equitably apportion the costs of constructing additional off-site facilities necessary to provide water production, delivery, storage and pressure among all new service connections. These charges are applicable to all new service connections after the effective date of this tariff. The charges are one-time charges and are payable as a condition to Company's establishment of service, as more particularly provided below.

II. Definitions

Unless the context otherwise requires, the definitions set forth in R-14-2-401 of the Arizona Corporation Commission's ("Commission") rules and regulations governing water utilities shall apply in interpreting this tariff schedule.

"Applicant" means any person or entity requesting service to one or more new service connections, and may include Developers and/or Builders of new residential subdivisions and/or commercial and industrial properties.

"Company" means Liberty Utilities (Litchfield Park Water & Sewer) Corp. – Water Division.

"Main Extension Agreement" means any agreement whereby an Applicant, Developer and/or Builder agrees to advance the costs of the installation of water facilities necessary to the Company to serve new service connections within a development, or installs such water facilities necessary to serve new service connections and transfers ownership of such water facilities to the Company, which agreement shall require the approval of the Commission pursuant to A.A.C. R-14-2-406, and shall have the same meaning as "Water Facilities Agreement" or "Line Extension Agreement."

"Off-site Facilities" means wells, storage tanks and related appurtenances necessary for proper operation, including engineering and design costs. Off-site facilities may also include booster pumps, pressure tanks, transmission mains and related appurtenances necessary for proper operation if these facilities are not for the exclusive use of the applicant and will benefit the entire water system.

"Service Connection" means and includes all service connections for single-family residential, commercial, industrial or other uses, regardless of meter size.

PART NINE
HOOK-UP FEE TARIFF – WATER

III. Water Hook-up Fee

For each new service connection, the Company shall collect an off-site hook-up fee derived from the following table:

Meter Size	Size Factor	Total Fee
5/8" x 3/4"	1	$1,800
3/4"	1.5	$2,700
1"	2.5	$4,500
1-1/2"	5	$9,000
2"	8	$14,400
3"	16	$28,800
4"	25	$45,000
6"	50	$90,000
8"	80	$144,000
10" (turbine)	145	$261,000
12" (turbine)	215	$387,000

(A) For "Active Adult" communities with demonstrated age-restricted zoning and/or CCRs providing for age-restricted living, the Total Fee for domestic water use shall be Two-Thirds (2/3) of the Total Fee shown above for Residential properties, based on an ERU factor of 190 gallons per day. All non-domestic service connections shall pay the Hook-up fee per the above table.

IV. Terms and Conditions

(A) Assessment of One Time Off-Site Hook-up Fee: The off-site hook-up fee will be assessed only once per residential parcel. For non-residential Properties, that reside on one parcel but has future additional construction that requires an upsize in water meters or additional water meters, the Company shall assess an additional Hook-up fee based on Hook-up Fees associated with old water meter size and new water meter size difference in fees or the Hook-up Fee associated with the additional requested water meter size.

(B) Use of Off-Site Hook-up Fee: Off-site hook-up fees may only be used to pay for capital items of Off-site Facilities, or for repayment of loans obtained to fund the cost of installation of off-site facilities. Off-site hook-up fees shall not be used to cover repairs, maintenance, or operational costs. The Company shall record amounts collected under the tariff as CIAC; however, such amounts shall not be deducted from rate base until such amounts have been expended for plant.

ISSUED BY:
Matthew Garlick, President
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392
Decision No. XXXXX

APPROVED FOR FILING
DECISION NO. 76799

PART NINE
HOOK-UP FEE TARIFF – WATER

(C) Time of Payment:

1) For those requiring a Main Extension Agreement: In the event that the person or entity that will be constructing improvements ("Applicant", "Developer" or "Builder") is otherwise required to enter into a Main Extension Agreement, whereby the Applicant, Developer or Builder agrees to advance the costs of installing mains, valves, fittings, hydrants and other on-site improvements in order to extend service in accordance with R-14-2-406(B), payment of the Hook-Up Fees required hereunder shall be made by the Applicant, Developer or Builder no later than within 15 calendar days after receipt of notification from the Company that the Utilities Division of the Arizona Corporation Commission has approved the Main Extension Agreement in accordance with R-14-2-406(M).

2) For those connecting to an existing main: In the event that the Applicant, Developer or Builder for service is not required to enter into a Main Extension Agreement, the Hook-Up Fee charges hereunder shall be due and payable at the time the meter and service line installation fee is due and payable.

(D) Off-Site Facilities Construction by Developer: Company and Applicant, Developer, or Builder may agree to construction of off-site facilities necessary to serve a particular development by Applicant, Developer or Builder, which facilities are then conveyed to Company. In that event, Company shall credit the total cost of such off-site facilities as an offset to off-site hook-up fees due under this Tariff. If the total cost of the off-site facilities constructed by Applicant, Developer or Builder and conveyed to Company is less than the applicable off-site hook-up fees under this Tariff, Applicant, Developer or Builder shall pay the remaining amount of off-site hook-up fees owed hereunder. If the total cost of the off-site facilities contributed by Applicant, Developer or Builder and conveyed to Company is more than the applicable off-site hook-up fees under this Tariff, Applicant, Developer or Builder shall be refunded the difference upon acceptance of the off-site facilities by the Company.

(E) Failure to Pay Charges; Delinquent Payments: The Company will not be obligated to make an advance commitment to provide or actually provide water service to any Developer, Builder or other applicant for service in the event that the Developer, Builder or other applicant for service has not paid in full all charges hereunder. Under no circumstances will the Company set a meter or otherwise allow service to be established if the entire amount of any payment due hereunder has not been paid.

APPROVED FOR FILING
DECISION NO. 76799

PART NINE
HOOK-UP FEE TARIFF – WATER

(F) Large Subdivision/Development Projects: In the event that the Applicant, Developer or Builder is engaged in the development of a residential subdivision containing more than 150 lots, the Company may, in its discretion, agree to payment of off-site hook-up fees in installments. Such installments may be based on the residential subdivision development's phasing, and should attempt to equitably apportion the payment of charges hereunder based on the Applicant's, Developer's or Builder's construction schedule and water service requirements. In the alternative, the Applicant, Developer, or Builder shall post an irrevocable letter of credit in favor of the Company in a commercially reasonable form, which may be drawn by the Company consistent with the actual or planned construction and hook up schedule for the subdivision and/or development.

(G) Off-Site Hook-Up Fees Non-refundable: The amounts collected by the Company as Hook-Up Fees pursuant to the off-site hook-up fee tariff shall be non-refundable contributions in aid of construction.

(H) Use of Off-Site Hook-Up Fees Received: All funds collected by the Company as off-site hook-up fees shall be deposited into a separate interest bearing trust account and used solely for the purposes of paying for the costs of installation of off-site facilities, including repayment of loans obtained for the installation of off-site facilities that will benefit the entire water system.

(I) Off-Site Hook-up Fee in Addition to On-site Facilities: The off-site hook-up fee shall be in addition to any costs associated with the construction of on-site facilities under a Main Extension Agreement pursuant to A.A.C. R14-2-406 and any applicable Main Extension Tariff.

(J) Disposition of Excess Funds: After all necessary and desirable off-site facilities are constructed utilizing funds collected pursuant to the off-site hook-up fees, or if the off-site hook-up fee has been terminated by order of the Arizona Corporation Commission, any funds remaining in the trust shall be refunded. The manner of the refund shall be determined by the Commission at the time a refund becomes necessary.

(K) Fire Flow Requirements: In the event the applicant for service has fire flow requirements that require additional facilities beyond those facilities whose costs were included in the off-site hook-up fee, and which are contemplated to be constructed using the proceeds of the off-site hook-up Fee, the Company may require the applicant to install such additional facilities as are required to meet those additional fire flow requirements, as a non-refundable contribution, in addition to the off-site hook-up fee.

(L) Status Reporting Requirements to the Commission: The Company shall submit a calendar year Off-Site Hook-Up Fee status report each January to Docket Control for the prior twelve (12) month period, beginning January 2019, until the hook-up fee tariff is no longer in effect. This status report shall contain a list of all customers that have paid the hook-up fee tariff, the amount each has paid, the physical location/address of the property in respect of which such fee was paid, the amount of money spent from the account, the amount of interest earned on the funds within the tariff account, and a list of all facilities that have been installed with the tariff funds during the 12 month period.

APPROVED FOR FILING
DECISION NO. 76799

PART NINE
HOOK-UP FEE TARIFF

WASTEWATER HOOK-UP FEE

I. Purpose and Applicability

The purpose of the off-site facilities hook-up fees payable to Liberty Utilities (Litchfield Park Water & Sewer) Corp. (the "Company") pursuant to this tariff is to equitably apportion the costs of constructing additional off-site facilities to provide wastewater treatment and disposal facilities among all new service laterals. These charges are applicable to all new service laterals undertaken via Collection Main Extension Agreements, or requests for service not requiring a Collection Main Extension Agreement, entered into after the effective date of this tariff. The charges are one-time charges and are payable as a condition to Company's establishment of service, as more particularly provided below.

II. Definitions

Unless the context otherwise requires, the definitions set forth in R-14-2-601 of the Arizona Corporation Commission's ("Commission") rules and regulations governing sewer utilities shall apply interpreting this tariff schedule.

"Applicant" means any party entering into an agreement with Company for the installation of wastewater facilities to serve new service laterals and may include Developers and/or Builders of new residential subdivisions, and industrial or commercial properties.

"Company" means Liberty Utilities (Litchfield Park Water & Sewer) Corp. – Wastewater Division.

"Collection Main Extension Agreement" means an agreement whereby an Applicant, Developer and/or Builder agrees to advance the costs of the installation of wastewater facilities necessary to serve new service laterals, or install wastewater facilities to serve new service laterals and transfer ownership of such wastewater facilities to the Company, which agreement does not require the approval of the Commission pursuant to A.A.C. R-14-2-606, and shall have the same meaning as "Wastewater Facilities Agreement."

"Off-site Facilities" means the wastewater treatment plant, sludge disposal facilities, effluent disposal facilities and related appurtenances necessary for proper operation, including engineering and design costs. Offsite facilities may also include lift stations, force mains, transportation mains and related appurtenances necessary for proper operation if these facilities are not for the exclusive use of the applicant and benefit the entire wastewater system.

"Service Lateral" means and includes all service laterals for single-family residential, commercial, industrial or other uses.

ISSUED BY:
Matthew Garlick, President
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392
Decision No. XXXXX

PART NINE
HOOK-UP FEE TARIFF – WASTEWATER

III. Wastewater Hook-up Fee

For each new residential service lateral, the Company shall collect a Hook-Up Fee of $1,800 based on the Equivalent Residential Unit ("ERU") of 320 gallons per day. Commercial and industrial applicants shall pay based on the total ERUs of their development calculated by dividing the estimated total daily wastewater capacity usage needed for service using standard engineering standards and criteria by the ERU factor of 320 gallons per day. For "Active Adult" communities with demonstrated age-restricted zoning and/or CCRs providing for age-restricted living, the Hook-Up Fee for residential properties shall be $1,070, based on an ERU factor of 190 gallons per day.

IV. Terms and Conditions

(A) Assessment of One Time Off-Site Facilities Hook-up Fee: The off-site facilities hook-up fee may be assessed only once per residential parcel. For non-residential properties that reside on one parcel but have future additional construction that adds additional impact to the Company's existing wastewater infrastructure an incremental Hook-Up Fee shall be applied based upon the additional EDU equivalents added by such construction activity.

(B) Use of Off-Site Facilities Hook-up Fee: Off-site facilities hook-up fees may only be used to pay for capital items of Off-site Facilities or for repayment of loans obtained to fund the cost of installation of off-site facilities. Off-site hook-up fees shall not be used to cover repairs, maintenance, or operational costs. The Company shall record amounts collected under the tariff as CIAC; however, such amounts shall not be deducted from rate base until such amounts have been expended for plant.

(C) Time of Payment:

(1) In the event that the person or entity that will be constructing improvements ("Applicant", "Developer" or "Builder") is otherwise required to enter into a Collection Main Extension Agreement, payment of the fees required hereunder shall be made by the Applicant, Developer or Builder within 15 days of execution of a Main Extension Agreement.

(2) In the event that the Applicant, Developer or Builder for service is not required to enter into a Collection Main Extension Agreement, the Hook-Up Fee charges hereunder shall be due and payable at the time wastewater service is requested for the property.

SUPERSEDED

ISSUED BY:
Matthew Garlick, President
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392
Decision No. XXXXX

APPROVED FOR FILING
DECISION NO. 76799

PART NINE
HOOK-UP FEE TARIFF – WASTEWATER

(D) Off-Site Facilities Construction by Developer: Company and Applicant, Developer, or Builder may agree to construction of off-site facilities necessary to serve a particular development by Applicant, Developer or Builder, which facilities are then conveyed to Company. In that event, Company shall credit the total cost of such off-site facilities as an offset to off-site hook-up fees due under this Tariff. If the total cost of the off-site facilities constructed by Applicant, Developer or Builder and conveyed to Company is less than the applicable off-site hook-up fees under this Tariff, Applicant, Developer or Builder shall pay the remaining amount of off-site hook-up fees owed hereunder. If the total cost of the off-site facilities contributed by Applicant, Developer or Builder and conveyed to Company is more than the applicable off-site hook-up fees under this Tariff, Developer or Builder shall be refunded the difference upon acceptance of the off-site facilities by the Company.

(E) Failure to Pay Charges; Delinquent Payments: The Company will not be obligated to make an advance commitment to provide or actually provide wastewater service to any Developer, Builder or other applicant for service in the event that the Developer, Builder or other applicant for service has not paid in full all charges hereunder. Under no circumstances will the Company connect service or otherwise allow service to be established if the entire amount of any payment has not been paid.

(F) Large Subdivision and/or Development Projects: In the event that the Applicant, Developer or Builder is engaged in the development of a residential subdivision and/or development containing more than 150 lots, the Company may, in its reasonable discretion, agree to payment of off-site hook-up fees in installments. Such installments may be based on the residential subdivision and/or development's phasing, and should attempt to equitably apportion the payment of charges hereunder based on the Applicant's, Developer's or Builder's construction schedule and water service requirements. In the alternative, the Applicant, Developer, or Builder shall post an irrevocable letter of credit in favor of the Company in a commercially reasonable form which may be drawn by the Company consistent with the actual or planned construction and hook-up schedule for the subdivision and/or development.

(G) Off-Site Hook-Up Fees Non-refundable: The amounts collected by the Company pursuant to the off-site facilities hook-up fee tariff shall be non-refundable contributions in aid of construction.

(H) Use of Off-Site Hook-Up Fees Received: All funds collected by the Company as off-site facilities hook-up fees shall be deposited into a separate account and bear interest and shall be used solely for the purposes of paying for the costs of installation of off-site facilities, including repayment of loans obtained for the installation of off-site facilities.

(I) Off-Site Facilities Hook-up Fee in Addition to On-site Facilities: The off-site facilities hook-up fee shall be in addition to any costs associated with the construction of on-site facilities under a Collection Main Extension Agreement.

SUPERSEDED

ISSUED BY:
Matthew Garlick, President
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392
Decision No. XXXXX

APPROVED FOR FILING
DECISION NO. 76799

PART NINE
HOOK-UP FEE TARIFF – WASTEWATER

(J) Disposition of Excess Funds: After all necessary and desirable off-site facilities are constructed utilizing funds collected pursuant to the off-site facilities hook-up fees, or if the off-site facilities hook-up fee has been terminated by order of the Arizona Corporation Commission, any funds remaining in the trust shall be refunded. The manner of the refund shall be determined by the Commission at the time a refund becomes necessary.

(K) Status Reporting Requirements to the Commission: The Company shall submit a calendar year Off-Site Facilities Hook-Up Fee status report each January to Docket Control for the prior twelve (12) month period, beginning January 2019, until the hook-up fee tariff is no longer in effect. This status report shall contain a list of all customers that have paid the hook-up fee tariff, the amount each has paid, the physical location/address of the property in respect of which such fee was paid, the amount of money spent from the account, the amount of interest earned on the funds within the tariff account, and an itemization of all facilities that have been installed using the tariff funds during the 12 month period.

SUPERSEDED

ISSUED BY:
Matthew Garlick, President
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392
Decision No. XXXXX

APPROVED FOR FILING
DECISION NO. 76799

ORIGINAL

Applies to all service areas

ALTERNATE RATES FOR WATER AND WASTEWATER (ARWW)
SURCHARGE

APPLICABILITY

Applicable to all customers of the Company not participating in the Alternate Rates for Water and Wastewater (ARWW) program, through which residential water and wastewater service for domestic use is rendered to low income households where the customer meets all the ARWW program qualifications and special conditions of the ARWW rate schedule.

TERRITORY

Within all customer service areas served by the Company.

RATES

Water Division

A surcharge of $0.0037 per 1,000 gallons will be applied each month to the bills of non-participating water division customers for recovery of the costs (discounts, direct costs, and carrying charges) associated with the ARWW program. The surcharge is the amount resulting from dividing the total program costs by the number of gallons sold to non-participating water division customers in the past 12-month tracking period.

Wastewater Division

A surcharge of $0.05 will be applied each month to the bills of non-participating wastewater division customers for recovery of the costs (discounts, direct costs, and carrying charges) associated with the ARWW program. The surcharge is the amount resulting from dividing the total program costs by the number of bills issued to non-participating wastewater division customers in the past 12-month tracking period.

APPROVED FOR FILING
DECISION #: 74437

Exhibit 8

General Statement of Financial Conditions

Liberty Utilities (Litchfield Park Water and Sewer) Cor
Annual Report
Balance Sheet Assets, Liabilities & Stockholders Equit
12/31/2022

Wastewater - Balance Sheet Assets				
	Assets		Balance at Beginning of Year (2022)	Balance at End of Year (2022)
Account No	**Current and Accrued Assets**			
131	Cash		$0	280,870.04
132	Special Deposits		10,218,876	17,582,736
135	Temporary Cash Investments		0	0
141	Customer Accounts Receivable		1,667,946	1,240,993
142	Other Accounts Receivable		0	292,520
143	Accumulated Provision for Uncollectable Accounts		(124,970)	(119,379)
146	Notes Receivable from Associated Companies		11,017,286	0
151	Plant Material and Supplies		0	0
162	Prepayments		17,114	51,428
173	Accrued Utility Revenue		1,643,623	3,657,719
174	Miscellaneous Current and Accrued Assets		0	0
	Total Current and Accrued Assets		**$24,439,875**	**$22,986,888**
	Deferred Debits			
186.1	Deferred Rate Case Expense		$275,433	$327,240
186.2	Other Deferred Debits		0	0
	Total Deferred Debits		**$275,433**	**$327,240**
	Fixed Assets			
101	Utility Plant in Service*		$130,036,893	$140,802,831
103	Property Held for Future Use		38,480	38,480
105	Construction Work in Progress		11,730,950	30,199,160
108	Accumulated Depreciation**(enter as negative)***		(41,583,078)	(46,201,289)
121	Non-Utility Property		0	0
122	Accumulated Depreciation - Non Utility		0	0
	Total Fixed Assets		**$100,223,245**	**$124,839,182**
	Total Assets		**$124,938,553**	**$148,153,310**

Water - Balance Sheet Assets				
	Assets		Balance at Beginning of Year (2022)	Balance at End of Year (2022)
Account No.	**Current and Accrued Assets**			
131	Cash		$0	$223,642
134	Working Funds		7,673,322	12,449,650
135	Temporary Cash Investments		0	0
141	Customer Accounts Receivable		1,363,565	988,139
142	Other Accounts Receivable		0	0
143	Accumulated Provision for Uncollectable Accounts		(102,164)	(95,055)
146	Notes Receivable from Associated Companies		9,006,759	0
151	Plant Material and Supplies		0	0
162	Prepayments		212,664	188,134
173	Accrued Utility Revenue		3,713,711	1,353,788
174	Miscellaneous Current and Accrued Assets		0	0
	Total Current and Accrued Assets		**$21,867,858**	**$15,108,298**
	Deferred Debits			
186.1	Deferred Rate Case Expense		$222,230	$146,755
186.2	Other Deferred Debits		289,216	321,409
	Total Deferred Debits		**$511,445**	**$468,164**
Account No.	**Fixed Assets**			
101	Utility Plant in Service*		$122,699,209	$125,473,599
103	Property Held for Future Use		6,000	6,000
105	Construction Work in Progress		14,227,064	20,078,574
108	Accumulated Depreciation**(enter as negative)***		(44,822,816)	(49,015,723)
121	Non-Utility Property		21,100	21,100
122	Accumulated Depreciation - Non Utility		0	0
	Total Fixed Assets		**$92,130,558**	**$96,563,549**
	Total Assets		**$114,509,861**	**$112,140,011**

Balance Sheet Liabilities and Owners Equity				
	Liabilities		Balance at Beginning of Year (2022)	Balance at End of Year (2022)
Account No	**Current Liabilities**			
231	Accounts Payable		$3,986	$14,027
232	Notes Payable (Current Portion)		0	637,802
234	Notes Payable to Associated Companies		0	0
235	Customer Deposits		0	0
236	Accrued Taxes		49,518	44,877
237	Accrued Interest		0	0
241	Miscellaneous Current and Accrued Liabilities		3,402,125	13,156,007
	Total Current Liabilities		**$3,455,628**	**$13,852,713**
	Long Term Debt			
224	Long Term Debt (Notes and Bonds)		$0	$0
	Total Long Term Debt		**$0**	**$0**
	Deferred Credits			
252	Advances in Aid of Construction		$1,564,869	$1,678,377
253	Other Deferred Credits		$16,767,207	$19,208,232
255	Accumulated Deferred Investment Tax Credits		0	0
271	Contributions in Aid of Construction		57,754,444	56,103,065
272	Less: Amortization of Contributions		(14,670,182)	(16,108,073)
281	Accumulated Deferred Income Tax		17,120,664	19,090,282
	Total Deferred Credits		**$78,537,001**	**$79,971,882**
	Total Liabilites		**$81,992,629**	**$93,824,595**
	Capital Accounts			
201	Common Stock Issued		$0	$0
211	Other Paid-In Capital		25,249,009	25,249,009
215	Retained Earnings		17,696,915	29,079,706
218	Proprietary Capital (Sole Props and Partnerships)		0	0
	Total Capital		**$42,945,924**	**$54,328,715**
	Total Liabilities and Capital		**$124,938,553**	**$148,153,310**

Balance Sheet Liabilities and Owners Equity				
	Liabilities		Balance at Beginning of Year (2021)	Balance at End of Year (2021)
Account No.	**Current Liabilities**			
231	Accounts Payable		$3,258	$11,169
232	Notes Payable (Current Portion)		0	507,849
234	Notes Payable to Associated Companies		0	0
235	Customer Deposits		1,447,569	1,672,882
236	Accrued Taxes		40,481	35,733
237	Accrued Interest		0	0
242	Miscellaneous Current and Accrued Liabilities		3,174,503	3,046,722
253	Other Deferred Credits		7,331,340	13,250,906
	Total Current Liabilities		**$11,997,152**	**$18,525,260**
	Long Term Debt			
224	Long Term Debt (Notes and Bonds		$0	$0
	Deferred Credits			
251	Unamortized Premium on Debt			
252	Advances in Aid of Construction		5,177,589	5,211,029
253	Other Deferred Credits		0	0
255	Accumulated Deferred Investment Tax Credits		0	0
271	Contributions in Aid of Construction		42,104,341	36,476,030
272	Less: Amortization of Contributions		(5,436,024)	(6,147,378)
281	Accumulated Deferred Income Tax		13,996,341	15,200,608
	Total Deferred Credits		**$55,842,247**	**$50,740,289**
	Total Liabilites		**$67,839,399**	**$69,265,550**
	Capital Accounts			
201	Common Stock Issued		$0	$0
211	Other Paid-In Capital		26,288,123	26,288,123
215	Retained Earnings		20,382,340	16,586,338
218	Proprietary Capital (Sole Props and Partnership		0	0
	Total Capital		**$46,670,463**	**$42,874,461**
	Total Liabilities and Capital		**$114,509,861**	**$112,140,011**

Liberty Utilities (Litchfield Park Water and Sewer) Corp
Annual Report
Comparative Income Statements
2021-2022

Wastewater Comparative Income Statement			
Account No.	Calendar Year	Current Year 01/01/2022 - 12/31/2022	Last Year 01/01/2021 - 12/31/2021
	Operating Revenue		
521	Flat Rate Revenues	$15,093,601	$14,463,509
522	Measured Revenues	3,117,683	2,673,079
534	Rents from Wastewater Property	0	0
536	Other Wastewater Revenues	716,734	864,087
420	AFUDC Income	33,876	35,006
	Total Revenues	**$18,961,893**	**$18,035,681**
	Operating Expenses		
701	Salaries and Wages	$0	$0
704	Employee Pensions and Benefits	0	0
710	Purchased Wastewater Treatment	27,271	35,377
711	Sludge Removal Expense	541,278	459,649
715	Purchased Power	888,660	754,369
716	Fuel for Power Production	2,235	1,001
718	Chemicals	507,245	427,362
720	Materials and Supplies	51,909	47,225
720.1	Repairs and Maintenance	85,541	56,243
720.2	Office Supplies and Expense	0	0
721	Office Expense	21,941	15,524
731	Contractual Services -Engineering	0	0
732	Contractual Services - Accounting	46,345	26,655
733	Contractual Services - Legal	175,999	15,198
734	Contractual Services - Management Fees	2,341,442	2,458,050
735	Contractual Services - Testing	32,291	39,463
736	Contractual Services - Other	1,779,696	1,570,148
740	Rents - Building	31,140	84,457
742	Rents - Equipment	1,591	10,403
750	Transportation Expenses	77,713	50,233
757	Insurance - General Liability	137,079	101,968
758	Insurance - Worker's Compensation	0	0
759	Insurance - Other	0	0
760	Advertising Expense	593	51
766	Regulatory Commission Expense - Rate Case	0	0
767	Regulatory Commission Expense - Other	0	0
770	Bad Debt Expense	(2,891)	58,447
775	Miscellaneous Expense	90,997	120,031
403	Depreciation Expense (From Schedule AR4)	2,764,896	2,517,761
408	Taxes Other Than Income	0	0
408.11	Property Taxes	616,514	636,847
408.12	Payroll Taxes	0	0
409	Income Taxes	(89,256)	(89,256)
	Total Operating Expenses	**$10,130,228**	**$9,397,208**
	Operating Income / (Loss)	**$8,831,664**	**$8,638,473**
	Other Income / (Expense)		
414	Gain (Loss) on Dispositions	0	0
419	Interest and Dividend Income	0	0
421	Non-Utility Income	0	0
426	Miscellaneous Non-Utility (Expense)	(97,285)	(104,535)
427	Interest (Expense)	0	0
	Total Other Income / (Expense)	**($97,285)**	**($104,535)**
	Net Income / (Loss)	**$8,734,379**	**$8,533,937**

Water Comparative Income Statement			
Account No.	Calendar Year	Current Year 01/01/2022 - 12/31/2022	Last Year 01/01/2021 - 12/31/2021
	Operating Revenue		
461	Metered Water Revenue	$8,889,024	$8,856,083
460	Unmetered Water Revenue	5,668,035	5,667,475
462	Fire Protection Revenue	52,178	51,111
469	Guaranteed Revenues (Surcharges)	0	0
471	Miscellaneous Service Revenues	0	0
474	Other Water Revenue	270,846	141,090
	Total Revenues	**$14,880,083**	**$14,715,760**
	Operating Expenses		
601	Salaries and Wages	$0	$0
604	Employee Pensions and Benefits	0	0
610	Purchased Water	6,200	2,180
615	Purchased Power	1,269,794	1,142,035
616	Fuel for Power Production	886	6,721
618	Chemicals	610,553	701,036
620	Materials and Supplies	57,880	31,285
620.1	Repairs and Maintenance	0	0
620.2	Office Supplies and Expense	40,307	80,995
630	Contractual Services	0	0
631	Contractual Services - Engineering	0	0
632	Contractual Services - Accounting	0	0
633	Contractual Services - Legal	0	0
634	Contractual Services - Management Fees	2,523,630	2,449,052
635	Contractual Services - Water Testing	96,001	86,757
636	Contractual Services - Other	1,760,233	1,519,640
640	Rents	0	0
641	Rental of Building/Real Property	32,043	78,778
642	Rental of Equipment	(865)	5,582
650	Transportation Expenses	129,271	63,503
657	Insurance - General Liability	177,180	95,460
657.1	Insurance - Health and Life	0	0
665	Regulatory Commission Expense - Rate	0	0
667	Regulatory Commission Expense - Other	0	0
670	Bad Debt Expense	(7,077)	173,429
675	Miscellaneous Expense	269,837	212,024
403	Depreciation Expense (From Schedule AR4)	2,874,250	2,511,842
408	Taxes Other Than Income	0	0
408.11	Property Taxes	517,828	636,847
409	Income Taxes	2,912,989	2,865,417
427.1	Customer Security Deposit Interest	0	0
	Total Operating Expenses	**$13,270,938**	**$12,662,582**
	Operating Income / (Loss)	**$1,609,145**	**$2,053,177**
	Other Income / (Expense)		
419	Interest and Dividend Income	$0	$0
420	AFUDC Revenue	$273,522	$254,015
421	Non-Utility Income	0	0
426	Miscellaneous Non-Utility (Expense)	(196,255)	(271,741)
427	Interest (Expense)	(3,615)	(31,353)
433	Extraordinary Income	0	0
434	Extraordinary Deductions	0	0
	Total Other Income / (Expense)	**$73,651**	**($49,079)**
	Net Income / (Loss)	**$1,682,797**	**$2,004,098**

Exhibit 9

Estimated Annual Operating Revenue and Expenses, Income Statements, Balance Sheets and Plant Expenditures-First Five Years

Liberty Utilities (Litchfield Park Water and Sewer) Corp
Luke Field
Projected Incremental Statements of Income
2023-2028

Line No		2022	2023	2024	2025	2026	2027	2028
1	Water Revenues							
2	Residential	-	-	-	-	-	-	-
3								
4	Wastewater Revenues							
5	Commercial	-	-	-	1,836	2,754	2,754	2,754
6	**Total Estimated Revenue**	**-**	**-**	**-**	**1,836**	**2,754**	**2,754**	**2,754**
7								
8								
9	Purchase Power	-	-	-	184	275	275	275
10	Chemicals & Sludge exper	-	-	-	119	179	179	179
11	Repairs & Maintenance	-	-	-	64	96	96	96
12	Insurance	-	-	-	37	55	55	55
13	Ops, Admin, Office suppli	-	-	-	184	275	275	275
14	**Total Variance Costs**	**-**	**-**	**-**	**588**	**881**	**881**	**881**
15								
16	Depreciation	-	-	-	-	-	-	-
17	Property Taxes	-	-	-	147	220	220	220
18	Income Taxes	-	-		308	308	308	308
19	**Total Other Expense**	**-**	**-**	**-**	**455**	**528**	**528**	**528**
20								
21	**Total Operating Expense**	**-**	**-**	**-**	**1,042**	**1,410**	**1,410**	**1,410**
22								
23	**Operating Income**	**-**	**-**	**-**	**794**	**1,344**	**1,344**	**1,344**
24								
25								
26								
27								
28								
29								
30								
31								

Luke Field	2022	2023	2024	2025	2026	2027	2028
Water	0	0	0	0	0	0	0
Sewer	0	0	0	2	3	3	3

Liberty Utilities (Litchfield Park Water & Sewer) Corp.
Luke Field
Projected Incremental Balance Sheet

Line No.			2022	2023	2024	2025	2026	2027	2028
1	**Assets**								
2									
3	Utility Plant /1		-	-	-	-	-	-	-
4	Utility Plant /2								
5	Accumulated Depreciation /3		-	-	-	-	-	-	-
6	Current Assets				-	794	2,138	3,482	4,827
7									
8	**Total Assets**	**-**	**-**	**-**	**-**	**794**	**2,138**	**3,482**	**4,827**
9									
10	**Equity**								
11									
12	Retained Earnings		-	-	-	794	2,138	3,482	4,827
13									
14	**Total Equity**		-	-	-	794	2,138	3,482	4,827
15									
16	**Liabilities & Deferred Credits**								
17	Current Liabilities								
18	Contribution in Aid of Const. /4		-	-	-	-	-	-	-
19	CIAC Amortization								
20	**Total Liabiliites and Deferred Credits**		-	-	-	-	-	-	-
21									
22	**Total Equity and Liabilities**		**-**	**-**	**-**	**794**	**2,138**	**3,482**	**4,827**
23									
24			0	0	0	0	0	0	0
			0	0	0	0	0	0	0

Liberty Utilities (Litchfield Park Water & Sewer) Corp. **Exhibit 8** **Exhibit 8** **Exhibit 8** **Exhibit 8** **Exhibit 8**
Luke Field
Projected Plant and Depreciation Page 3 Page 4 Page 5 Page 6 Page 7

Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	2009-2020 Plant Additions	2009-2020 Depreciation	2009-2020 Plant Balance	2009-2020 A/D Balance	2009-2020 Net Plant	2021 Plant Additions	2021 Depreciation	2021 Plant Balance	2021 A/D Balance	2021 Net Plant	2022 Plant Additions	2022 Depreciation	2022 Plant Balance	2022 A/D Balance	2022 Net Plant	2023 Plant Additions	2023 Depreciation	2023 Plant Balance	2023 A/D Balance	2023 Net Plant	2024 Plant Additions	2024 Depreciation	2024 Plant Balance	2024 A/D Balance	2024 Net Plant	2025 Net Plant	2026 Net Plant	2027 Net Plant	2027 Net Plant
		Wastewater																														
37	351	Organization Cost	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	352	Franchise Cost	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	353	Land and Land Rights	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	354	Structures & Improvements	3.33%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	355	Power Generating Equipment	5.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	360	Collection Sewers - Force	2.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	361	Collection Sewers - Gravity	2.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	362	Special Collecting Structures	2.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	363	Services to Customers	2.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	364	Flow Measuring Devices	10.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	365	Flow Measuring Installations	10.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	366	Reuse Services	2.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	367	Reuse Meters and Meter Installations	8.33%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	370	Receiving Wells	3.33%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	371	Pumping Equipment	12.50%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	374	Reuse Distribution Reservoirs	2.50%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	375	Reuse Transmission and Dist. Sys.	2.50%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	380	Treatment and Disposal Equipment	5.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	381	Plant Sewers	5.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	382	Outfall Sewer Lines	3.33%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	389	Other Plant and Misc. Equipment	6.67%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	390	Office Furniture & Equipment	6.67%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	390.1	Computers & Software	20.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	391	Transportation Equipment	20.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	392	Stores Equipment	4.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	393	Tools, Shop & Garage Equipment	5.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	394	Laboratory Equipment	10.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	395	Power Operated Equipment	5.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	396	Communications Equipment	10.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66	397	Miscellaneous Equipment	10.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67	398	Other Tangible Plant	10.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Wastewater Totals		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		GRAND TOTAL		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit 10A

Map of Existing Service Area

21-1329 - Northern & Dysart

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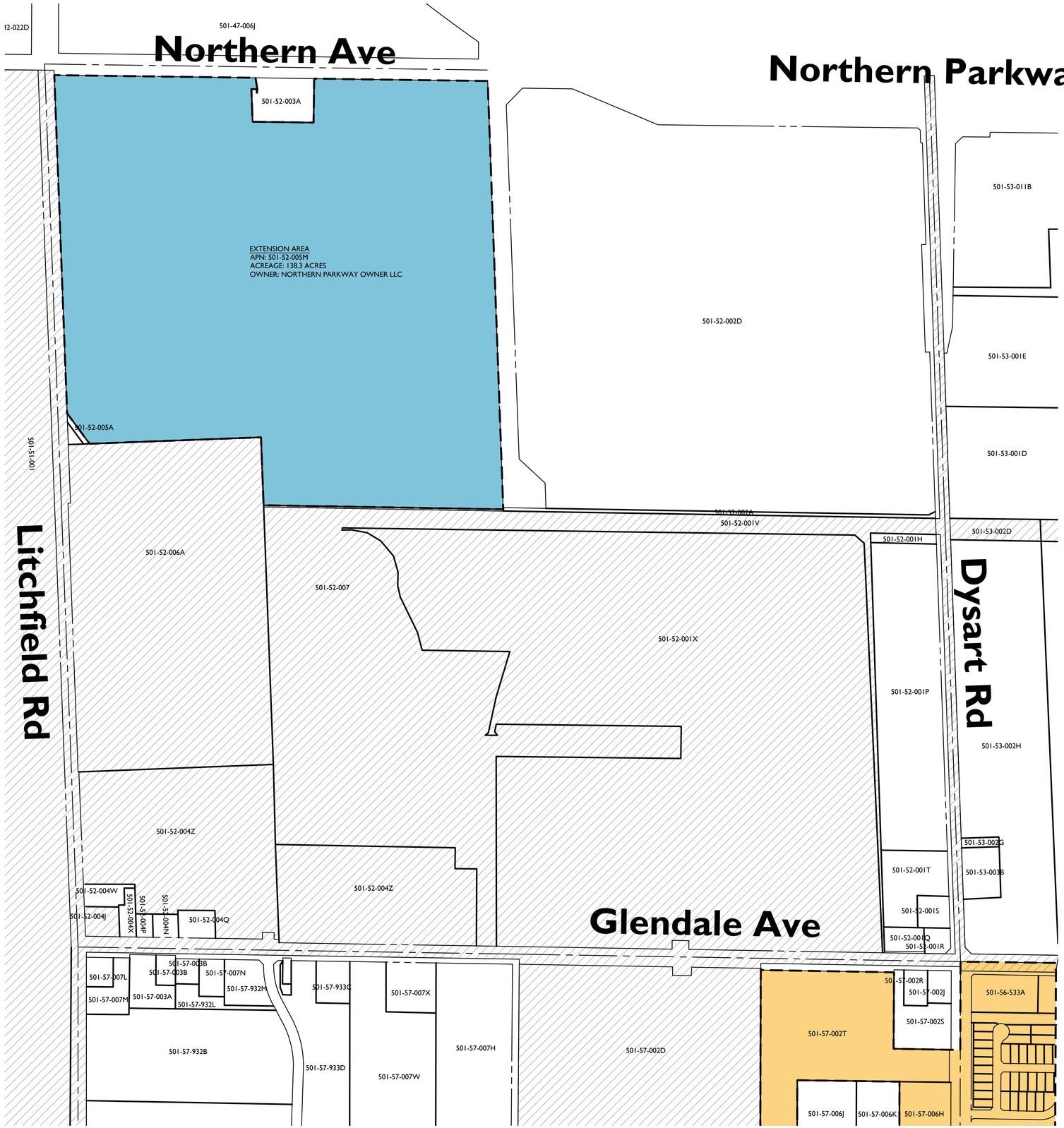


Hatch Legend

- City of Gledale
- Existing Service Area
- Extension Area Boundaries

300 0 300 600
scale: 1" = 300' feet

1130 N Alma School Road
Suite 120
Mesa, AZ 85201
T:480.503.2250 | F:480.503.2258
www.epsgroupinc.com
EPS GROUP

Project:
Luke Field
Maricopa County, Arizona

Exhibit 10 - Map of Existing/Proposed Service Area

Revisions:

Call at least two full working days before you begin excavation.
ARIZONA811
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602)263-1100

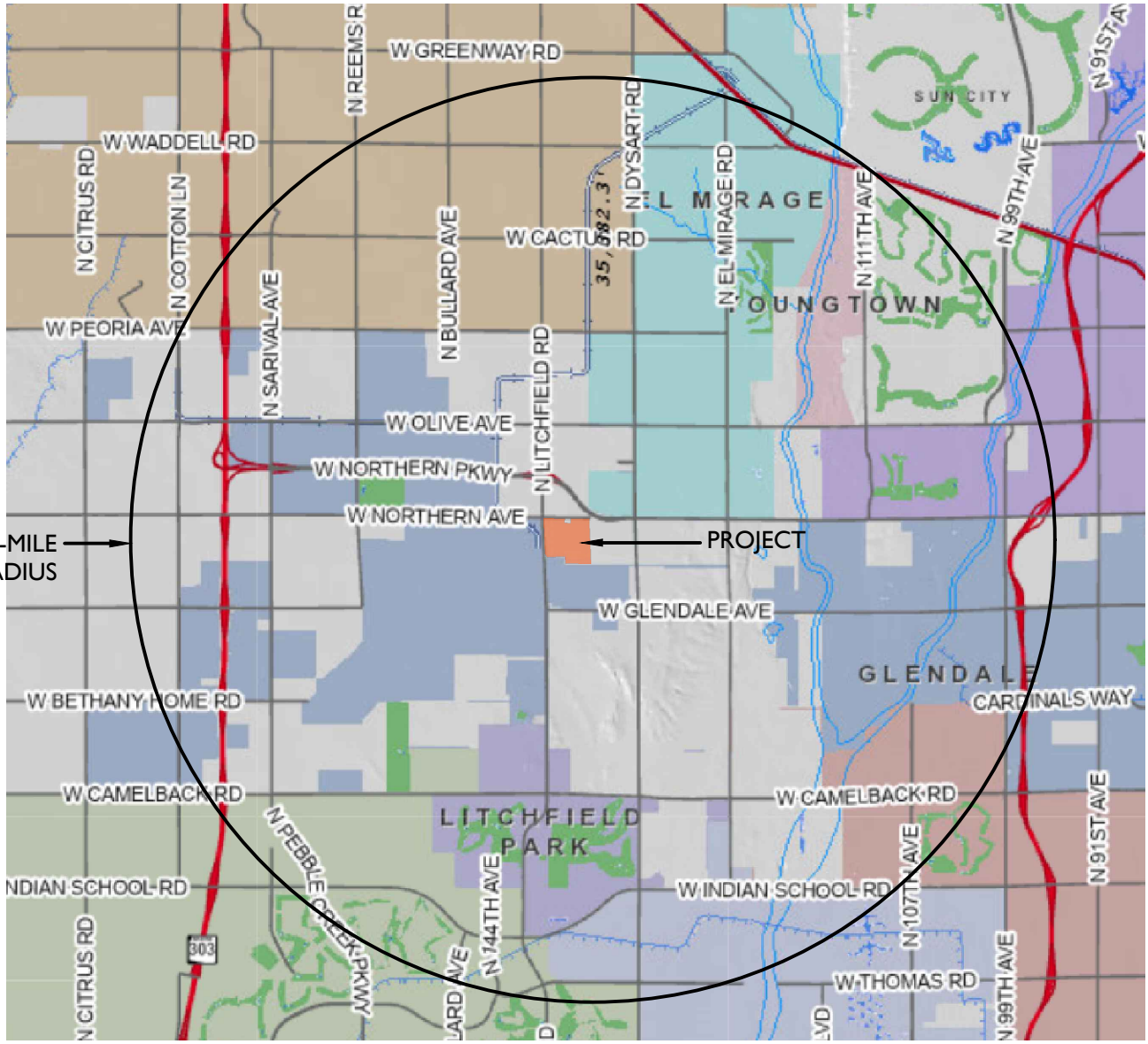
Designer: DBA
Drawn by: DBA

Job No.
22-0186
SA01

Sheet No.
1
of 1

Exhibit 10B

Second Map of Existing Service Area



- CITY OF SURPRISE
- CITY OF GLENDALE
- CITY OF GOODYEAR
- CITY OF LITCHFIELD PARK
- CITY OF PHOENIX
- CITY OF AVONDALE
- CITY OF PEORIA
- CITY OF EL MIRAGE
- CITY OF YOUNGTOWN
- UNINCORPORATED MARICOPA COUNTY

22-0186

Luke Field

Exhibit 10b - Adjacent Municipalities

EPS GROUP
1130 N. Alma School Rd
Suite 120 Mesa, AZ 85201
T:480.503.2250 | F:480.503.2258
www.epsgroupinc.com

Nov 06, 2023 1:29pm S:\Projects\2021\21-1329\Civil_Preliminary\Design\Sewer_Main Extension Agreement Exhibits\Exhibit 10c - Adjacent Municipalities.dwg

Exhibit 11

Form of Notice to be Sent to Municipalities

Within 5 Miles of Extension Area

Notice Required Pursuant to R14-2-402.B.4 and R14-2-602.B.4
Request for Extension of Certificates of Convenience and Necessity
Filed by Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Pursuant to A.A.C. R14-2-402.B.4 and R14-2-602.B.4, Liberty Utilities (Litchfield Park Water & Sewer) Corp. ("Liberty Litchfield Park") is providing this notice that Liberty Litchfield Park has made application to the Arizona Corporation Commission ("ACC") to extend its Certificates of Convenience and Necessity ("CC&Ns") to provide water and wastewater utility service to the Extension Area set forth below. The requested Extension Area is within five miles of your municipality's corporate limits. The specific notice requirements are as follows:

Applicant Name, Mailing Address and Telephone Number
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
14920 W. Camelback Road
Litchfield Park, AZ 85340
623-935-9367

Date Applications Were Filed
Applications for an extension of the CC&Ns were filed on XXXXX

Type of Service to be Provided
Wastewater Services

A Description of Requested Extension Area
Luke Field development (also referred to as the "Property" or "Extension Area") is described as an industrial development. Luke Field consists of approximately 139-acres (gross) and is located east of Litchfield Road between Northern Avenue and the Dysart Drain and will remain in unincorporated lands within Maricopa County.

ACC Docket Numbers
ACC Docket No. SW-01428A-24-XXXX

Instructions on How to Obtain a Copy of Applications
The applications are available for inspection through the ACC website (www.azcc.gov) using the e-Docket function, and from Liberty Utilities via its website, www.libertyutilities.com.

Exhibit 12

Estimated Number of Customers

First Five Years

Luke Field
Sewer CC&N
Exhibit 12 - 5 Year Customer Growth

Luke Field:

Customer Additions:	**2023**	**2024**	**2025**	**2026**	**2027**
Residential	0	0	0	0	0
Commercial	0	0	0	0	0
Industrial	0	0	3	1	1
Total	**0**	**0**	**3**	**1**	**1**

Exhibit 13

ADEQ PVWRF Aquifer Protection Permit

STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. P-100310
PLACE ID 815, LTF 93045
SIGNIFICANT AMENDMENT

1.0 AUTHORIZATION

In compliance with the provisions of Arizona Revised Statutes (A.R.S.) Title 49, Chapter 2, Articles 1, 2, and 3, Arizona Administrative Code (A.A.C.) Title 18, Chapter 9, Articles 1 and 2, A.A.C. Title 18, Chapter 11, Article 4 and amendments thereto, and the conditions set forth in this permit, the Arizona Department of Environmental Quality (ADEQ) hereby authorizes hereby authorizes the Liberty Utilities (Litchfield Park Water & Sewer) Corporation to operate the Palm Valley Water Reclamation Facility located at 14222 W. McDowell Road, Goodyear, Arizona, in Maricopa County, over groundwater of the Phoenix Active Management Area.

This permit becomes effective on the date of the Water Quality Division Deputy Director's signature and shall be valid for the life of the facility (operational, closure, and post-closure periods) unless suspended or revoked pursuant to A.A.C. R18-9-A213. The permittee shall construct, operate and maintain the permitted facilities:

1. Following all the conditions of this permit including the design and operational information documented or referenced below, and
2. Such that Aquifer Water Quality Standards (AWQS) are not violated at the applicable point(s) of compliance (POC) set forth below or if an AWQS for a pollutant has been exceeded in an aquifer at the time of permit issuance, that no additional degradation of the aquifer relative to that pollutant and as determined at the applicable POC occurs as a result of the discharge from the facility.

1.1. PERMITTEE INFORMATION

Facility Name:	Palm Valley Water Reclamation Facility (WRF)		
Facility Address:	14222 West McDowell Road Goodyear, Arizona, 85395		
County:	Maricopa		
Permitted Flow Rate:	7,470,000 gallons per day (gpd)		
Permittee:	Liberty Utilities (Litchfield Park Water & Sewer) Corporation		
Permittee Address:	14920 W. Camelback Rd. Litchfield Park, AZ 85340		
Facility Contact:	Manager	SCADA	Quantum SCADA Manager
Emergency Phone No.:	(623) 337 - 2210	(623) 298 – 4821	(480) 669 - 7124
Latitude/Longitude:	33° 27' 55" N/ 112° 21' 55" W		
Legal Description:	Township 02 S, Range 01 W, Section 33, SE¼, SW¼, SW¼ of the Gila and Salt River Baseline and Meridian		

1.2. AUTHORIZING SIGNATURE

DocuSigned by:

B394CB7051FD418...

Randall Matas, Deputy Director
Water Quality Division
Arizona Department of Environmental Quality

Signed this 18 day of January, 2024

THIS AMENDED PERMIT SUPERSEDES ALL PREVIOUS PERMITS

TABLE OF CONTENTS

TABLE OF TABLES

2.0 SPECIFIC CONDITIONS

[A.R.S. §§ 49-203(4), 49-241(A)]

2.1. FACILITY / SITE DESCRIPTION

[A.R.S. § 49-243(K)(8), and A.A.C. R18-5-114]

The permittee is authorized to operate the Palm Valley WRF, with a maximum average monthly flow of 6.9 mgd for Stage 1 Modifications and 7.17 and 7.47 mgd for Stage 2 Temporary Modifications. The Department has graded this facility as a Grade 4 wastewater treatment plant. The facility shall have an operator in direct responsible charge who is certified for the grade of the facility and inspects it daily.

Palm Valley WRF Stage 1 WRF (6.9 MGD)

The treatment process consists of a headworks that includes an influent pump station (IPS) with four 4,150-gpm pumps (3 duty; 1 standby) that pump into a common header that feeds three 7.9 mgd ¼-inch reciprocating influent screens (2 duty; 1 standby) with a washer compactor, then two vortex grit chambers (11.0 mgd and 7.0 mgd) with a grit classifier and washer. The screens and grit process can be bypassed directly into the Sequencing Batch Reactor (SBR) basins. Preliminary treated effluent flows to a 760,000 gallon influent equalization (EQ) basin, equipped with three (2 duty; 1 standby) VFD operated 5,500-gpm SBR feed pumps.

From the EQ basin, flow is pumped to an influent manifold that distributes the influent to the bottom of four Sequencing Batch Reactors (SBR 1, SBR 2, SBR 3, and SBR 4) basins with jet aeration, motive pumps, and decanters. SBR Basins 1 and 2 has five 1,600-cfm blowers, two dedicated to each SBR and one common redundant blower, and four 5,900-gpm motive pumps in each basin. SBR basins 3 and 4 has five 1,800-cfm blowers, two dedicated to each SBR and one common redundant blower, and two 7,300-gpm motive pumps in each basin. SBR 1 and 2 each have a 1,000-gpm WAS pump in the pump gallery, and SBR 3 and 4 each have a 1,300-gpm WAS pump in each basin. WAS is pumped to one of four sludge holding tanks. Sludge Holding Tanks 1-3 have perforated membrane tube diffusers, while Sludge Holding Tank 4 has jet aeration, because it was converted from an SBR.

Secondary effluent is decanted from the SBRs into a header that sends it to two surge tanks equipped with three pumps (5,700-gpm, 5,700-gpm, and 1,400-gpm) to attenuate the flow before it is pumped into five 2.0-mgd disk filters (4 duty; 1 standby), each equipped with 8 disks. A clearwell with four 2,000-gpm turbine pumps receives effluent from the disk filters and pumps it through the UV disinfection system with three 5-mgd UV trains (2 duty; 1 standby) with 2 UV reactors in series (eight lamps each) per train. The WRF is designed to produce Reclaimed Water Reuse Class A+ effluent. After the Discharge Monitoring Point in Section 4.2; Table 9: ROUTINE DISCHARGE MONITORING; Sampling Point Number 1 and prior to entering the reclaimed water distribution system, the permittee may inject sodium hypochlorite to help prevent microbial growth in the reclaimed water distribution system. Routine chlorination may not be performed prior to the UV system.

The effluent from the WRF may be discharged to recharge at the Sustainable Effluent Aquifer Project (SEAP: APP No. 514107) located three miles north of the WRF, the Roosevelt Irrigation District (RID) canal under a valid AZPDES permit (AZ0025712), and/or reused for any allowable use under a valid reclaimed water permit. An interconnection between the Palm Valley (which includes the Sarival WRF APP No. 513981) reclaimed water distribution system and the City of Goodyear 157th Avenue WRF (APP No. 101324) reclaimed water distribution system allows reclaimed water to flow either way between the systems. Discharges to the RID canal are exempt from APP requirements pursuant to A.R.S. § 49-250(B)(6) and (16).

The Stage 1 Modifications included SCADA modifications to revise the program command for the fill setpoint and increase the total depth by 1 foot. This decreased the freeboard from 3-feet to 2-feet, increased the decant flow by 12,000 gallons, and increased the combined treatment capacity of the SBRs by 0.35 mgd.

Palm Valley WRF Stage 2A Temporary Modifications (7.17 MGD)

The Stage 2A Temporary Modifications include conversion of SBR Basin 1 to a Flow Through Reactor (FTR) basin that will remove the decant, settle, and idle phases and add clarifiers to perform these processes. This includes, adding a duplex skid-mounted pump system with two 3,000 gpm mixed liquor pumps, and six 10-ft x 47-ft x 10-ft temporary frac tanks (5 duty; 1 standby) with clarifier inserts that are 'dropped in' for a clarification capacity of 0.432 mgd for each frac tank. RAS will be sent from the six clarifiers to the beginning of FTR 1, or wasted to the sludge holding tanks. Effluent will be sent to the clear well. A spare clearwell pump will be purchased and remain near the clearwell, to meet redundancy requirements for the temporary modifications. RAS will be sent from the six clarifiers to the beginning of FTR 1 basin, so that it does not enter SBR 2, 3, or 4, and the WAS will be sent to the sludge holding tanks for further processing. The temporary clarifiers do not provide scum removal, therefore daily maintenance will include scum removal from a combination vacuum truck, or other method to get scum back to the sludge holding tanks or disposed of at a landfill. SBR 2, 3, and 4 will continue to operate with the Stage 1 Modifications.

Palm Valley WRF Stage 2B Temporary Modifications (7.47 MGD)

The Stage 2B Temporary Modifications include the modifications made in the Stage 2A Temporary Modifications, and conversion of SBR Basin 2 to an FTR basin, so that both SBR 1 and SBR 2 have been converted to FTR basins (FTR 1 and FTR 2). Five more temporary frac tanks (for a total of 10 duty; 1 standby) with clarifier modifications will be added to the facility. RAS will be sent from the 11 clarifiers to the beginning of the FTBs so that it does not enter SBR 3 or 4, and the WAS will be sent to the sludge holding tanks for further processing. SBR 3, and SBR 4 will continue to operate with the Stage 1 Modifications.

When the Sarival WRF (permitted for 4.4 MGD) comes online and starts treating wastewater, currently treated by the Palm Valley WRF, the Stage 2 Temporary Modifications will be discontinued, and the Stage 1 improvements will remain in operation. The permitted capacity will revert back to 6.9 MGD.

All the sludge, including screenings, grit, and scum, shall be hauled to landfill for disposal in accordance with State and Federal regulations.

The site includes the following permitted discharging facilities:

Table 1: DISCHARGING FACILITIES		
Facility	**Latitude (North)**	**Longitude (West)**
Palm Valley Water Reclamation Facility	33° 27' 55" N	112° 21' 55" W

2.1.1. Annual Registration Fee

[A.R.S. § 49-242 and A.A.C. R18-14-104]

The annual registration fee for this permit is payable to ADEQ each year. The annual registration fee flow rate is established by the permitted flow rate identified in Section 1.1. If the facility is not constructed or is incapable of discharge, the permittee may be eligible for reduced fees pursuant to A.A.C. R18-14-104(A), Table 2. Send all correspondence requesting reduced fees to the Groundwater Protection and Reuse Section. Please reference the permit number, LTF number, and the reason for requesting reduced fees under this rule.

2.1.2. Financial Capability

[A.R.S. § 49-243(N) and A.A.C. R18-9-A203]

The permittee has demonstrated financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The estimated dollar amount for facility closure is $1,236,163.25. The financial capability was demonstrated through a Letter of Credit A.A.C. R18-9-A203(C)(5).

2.2. BEST AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY (BADCT)

[A.R.S. § 49-243(B) and A.A.C. R18-9-A202(A)(5)]

The treatment facility shall be designed, constructed, operated, and maintained to meet the treatment performance criteria for new facilities as specified in A.A.C. R18-9-B204. The facility shall meet the performance requirement for industrial pre-treatment as per A.A.C. R18-9-B204(B)(6)(b).

The treatment facility shall not exceed a maximum seepage rate of 550 gallons per day per acre for all containment structures within the treatment works.

2.2.1. Engineering Design

The Stage 1 and Stage 2 Temporary improvements were designed as per the design report signed, dated, and sealed by Steven John Wedwick, P.E (Civil #35182) with NCS Engineers on March 3, 2023, and any subsequent submittals. As part of these improvements, the SEAP was moved to its own APP No. 514107 at ADEQ's request, since the SEAP is three miles from the treatment works.

The expansion of the WRF was designed and constructed per the design report and plans signed, dated, and sealed on November 2014, by Tim Leclair, P.E. (Civil #43824), with Amec Environmental & Infrastructure, Inc., and subsequent sealed submittals that served as additions to the design report.

2.2.2. Site-Specific Characteristics

Due to location in a neighborhood, full noise, odor, and aesthetic controls are required for this facility.

2.2.3. Pre-Operational Requirements

Prior to operating SBR1 as FTR Basin 1, operating the six frac tank clarifiers and RAS system, the permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion in a format approved by the Department per the compliance schedule in Section 3.0. The certificate shall be submitted to the Groundwater Protection and Reuse Section.

Prior to operating SBR 2 as FTR Basin 2, and operating the additional 5 clarifiers, the permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion in a format approved by the Department per the compliance schedule in Section 3.0. The certificate shall be submitted to the Groundwater Protection and Reuse Section.

2.2.4. Operational Requirements

1. The permittee shall maintain a copy of the up-to-date operations and maintenance manual at the treatment facility site at all times; the manual shall be available upon request during inspections by ADEQ personnel. This manual shall include an updated addendum for Stage 2A/2B Temporary Modifications.
2. The pollution control structures shall be inspected for the items listed in Section 4.2, Table 11: FACILITY INSPECTION AND OPERATIONAL MONITORING

2.2.5. Reclaimed Water Classification

[A.A.C. R18-9-B701(C)(2)(a), A.A.C. R18-11-303 through 307]

The treatment facility is rated as producing reclaimed water meeting the Class A+ Reclaimed Water Quality Standards (A.A.C. R18-11, Article 3) which may be used for any allowable Class A, B, or C use under a valid reclaimed water permit (A.A.C. R18-9, Article 7).

2.2.6. Certified Areawide Water Quality Management Plan Conformance

[A.A.C. R18-9-A201(B)(6)(a)]

Facility operations must conform to the approved Certified Areawide Water Quality Management Plan according to the 208 consistency determination in place at the time of permit issuance.

2.3. DISCHARGE LIMITATIONS

[A.R.S. §§ 49-201(14), 49-243 and A.A.C. R18-9-A205(B)]

1. The permittee is authorized to operate the treatment facility with a maximum average monthly flow of 6.9 million gallons per day (mgd) for Stage 1 Modifications, 7.17 for Stage 2A Temporary Modifications and 7.47 mgd for Stage 2B Temporary Modifications.
2. The permittee shall notify all users that the materials authorized to be disposed of through the treatment facility are typical household sewage and pre-treated commercial wastewater and shall not include motor oil, gasoline, paints, varnishes, hazardous wastes, solvents, pesticides, fertilizers or other materials not generally associated with toilet flushing, food preparation, laundry facilities and personal hygiene.
3. The permittee shall operate and maintain all permitted facilities to prevent unauthorized discharges pursuant to A.R.S. § 49-201(12) resulting from failure or bypassing of applicable BADCT.
4. Specific discharge limitations are listed in Section 4.2, Table 9: ROUTINE DISCHARGE MONITORING.

2.4. POINT OF COMPLIANCE (POC)

[A.R.S. § 49-244]

The Points of Compliance (POCs) have been established at the following locations:

Table 2: POINT(S) OF COMPLIANCE

POC #	POC Location	Latitude (North)	Longitude (West)
MW-1 (Conceptual)	Northwest corner of the WRF	33° 27' 57.2"	112° 21' 57.0"
MW-2 (Conceptual)	Southeast corner of the WRF	33° 27' 53.9"	112° 21' 50.8"

Groundwater monitoring is not required at the conceptual points of compliance, except as a contingency action at the WRF. MW-1 and MW-2 were switched to conceptual POC wells in 2020 during an APP amendment (LTF No.73291). The Director may amend this permit to require the installation of a well and the initiation of groundwater monitoring at the POC, or to designate additional points of compliance if information on groundwater gradients or groundwater usage indicates the need.

The depth to groundwater beneath the WRF is approximately 120 feet below land surface and the principal direction of groundwater flow is towards the northwest.

2.5. MONITORING REQUIREMENTS

[A.R.S. § 49-243(K)(1), A.A.C. R18-9-A206(A)]

Unless otherwise specified in this permit, all monitoring required in this permit shall continue for the duration of the permit, regardless of the status of the facility. Unless otherwise provided, monitoring shall commence the first full monitoring period following permit issuance. All sampling, preservation and holding times shall be in accordance with currently accepted standards of professional practice. Trip blanks, equipment blanks and duplicate samples shall also be obtained, and Chain-of-Custody procedures shall be followed, in accordance with currently accepted standards of professional practice. Copies of laboratory analyses and Chain-of-Custody forms shall be maintained at the permitted facility. Upon request, these documents shall be made immediately available for review by ADEQ personnel.

2.5.1. Pre-Operational Monitoring

Not Applicable

2.5.2. Routine Discharge Monitoring

The permittee shall monitor the effluent according to Section 4.2, Table 9: ROUTINE DISCHARGE MONITORING. Representative samples of the effluent shall be collected at the point of discharge from the effluent pump station.

2.5.3. Reclaimed Water Monitoring

The permittee shall monitor the reclaimed water according to the Class A+ Reclaimed Water Monitoring Table in Section 4.2, Table 10: RECLAIMED WATER MONITORING in addition to the routine discharge monitoring parameters listed in Table 9: ROUTINE DISCHARGE MONITORING. Representative samples of the reclaimed water shall be collected at the point of discharge from the effluent pump station.

2.5.4. Facility / Operational Monitoring

Operational monitoring inspections shall be conducted according to Section 4.2, Table 11: FACILITY INSPECTION AND OPERATIONAL MONITORING.

If any damage of the pollution control structures is identified during inspection, proper repair procedures shall be performed. All repair procedures and materials used shall be documented in the facility log book as per Section 2.7.2 and reported to ADEQ in case of a violation or exceedance as per Section 2.7.3.

2.5.5. Groundwater Monitoring and Sampling Protocols

Groundwater Monitoring is not required.

2.5.5.1. POC Well Replacement

Groundwater monitoring is not required at the conceptual points of compliance, except as a contingency action at the WRF. The Director may amend this permit to require the installation of a well and the initiation of groundwater monitoring.

2.5.6. Surface Water Monitoring and Sampling Protocols

Routine surface water monitoring is not required under the terms of this permit.

2.5.7. Analytical Methodology

All samples collected for compliance monitoring shall be analyzed using Arizona state-approved methods. If no state-approved method exists, then any appropriate EPA-approved method shall be used. Regardless of the method used, the detection limits must be sufficient to determine compliance with the regulatory limits of the parameters specified in this permit. If all methods have detection limits higher than the applicable limit, the permittee shall follow the applicable contingency requirements of Section 2.6 and may propose "other actions" including amending the permit to set higher limits. Analyses shall be performed by a laboratory licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification unless exempted under A.R.S. 36-495.02. For results to be considered valid, all analytical work shall meet quality control standards specified in the approved methods. A list of state-certified laboratories in Arizona can be obtained at the address below:

Arizona Department of Health Services
Office of Laboratory Licensure and Certification
250 North 17th Avenue
Phoenix, Arizona 85007
Phone: (602) 364-0720

2.5.8. Installation and Maintenance of Monitoring Equipment

Monitoring equipment required by this permit shall be installed and maintained so that representative samples required by the permit can be collected. If new groundwater wells are determined to be necessary, the construction details shall be submitted to the Groundwater Protection and Reuse Section for approval prior to installation and the permit shall be amended to include any new monitoring points.

2.6. CONTINGENCY PLAN REQUIREMENTS

[A.R.S. § 49-243(K)(3), (K)(7) and A.A.C. R18-9-A204 and R18-9-A205]

2.6.1. General Contingency Plan Requirements

At least one copy of this permit and the approved contingency and emergency response plan submitted in the application and referenced in Section 5.0 shall be maintained at the location where day-to-day decisions regarding the operation of the facility are made. The permittee shall be aware of and follow the contingency and emergency plans. This emergency plan shall include the addendum for the Stage 2A/2B Temporary Modifications that includes reporting and responding to events caused by the temporary facilities.

Any AL exceedance, or violation of a DL, or other permit condition shall be reported to ADEQ following the reporting requirements in Section 2.7.3, unless more specific reporting requirements are set forth in Section 2.6.2 through 2.6.5.

Some contingency actions involve verification sampling. Verification sampling shall consist of the first follow-up sample collected from a location that previously indicated a violation or the exceedance of an AL. Collection and analysis of the verification sample shall use the same protocols and test methods to analyze for the pollutant or pollutants that exceeded an AL or violated a DL. Where verification sampling is specified in this permit, it is the option of the permittee to perform such sampling. If verification sampling is not conducted within the timeframe allotted, ADEQ and the permittee shall presume the initial sampling result to be confirmed as if verification sampling had been conducted. The permittee is responsible for compliance with contingency plans relating to the exceedance of an AL or violation of a DL, or any other permit condition. The permittee is subject to enforcement action for the failure to comply with any contingency actions in this permit.

2.6.2. Exceeding of Alert Levels and Performance Levels

2.6.2.1. Exceeding of Performance Levels Set for Operational Conditions

For freeboard performance levels, the permittee shall comply with the requirements as specified in Section 4.2, Table 11: FACILITY INSPECTION AND OPERATIONAL MONITORING to prevent the overtopping of a tanks. If a tank is overtopped, the permittee shall follow the requirements in Section 2.6.5.3 and the reporting requirements of Section 2.7.3. This includes releases of more than 2,000 gallons of raw influent from the collection system or a treatment process, prior to biological treatment, that are contained onsite.

If a performance level set in Section 4.2, Table 11: FACILITY INSPECTION AND OPERATIONAL MONITORING has been exceeded the permittee shall:

1. Notify the Groundwater Protection and Reuse Section within five (5) days of becoming aware of the exceedance per Section 2.7.5.
2. Submit a written report to the Groundwater Protection and Reuse Section within thirty (30) days after becoming aware of the exceedance per Section 2.7.5. The report shall document all of the following:
    a. A description of the exceedance and the cause of the exceedance;
    b. The period of the exceedance, including exact date(s) and time(s), if known, and the anticipated time period during which the exceedance is expected to continue;

c. Any action taken or planned to mitigate the effects of the exceedance or spill, or to eliminate or prevent recurrence of the exceedance or spill;

d. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an AWQS; and

e. Any malfunction or failure of pollution control devices or other equipment or process.

3. The facility is no longer on alert status once the operational indicator no longer indicates that a performance level is being exceeded. The permittee shall, however, complete all tasks necessary to return the facility to its pre-alert operating condition.

2.6.2.2. Exceeding of Alert Levels (ALs) Set for Discharge Monitoring

1. If an AL set in Section 4.2, Table 9: ROUTINE DISCHARGE MONITORING has been exceeded, the permittee shall immediately investigate to determine the cause. The investigation shall include the following:

   a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the exceedance;

   b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences; and

   c. If the investigation procedures indicated in (a) and (b) above fail to reveal the cause of the exceedance, the permittee shall sample individual waste streams composing the wastewater for the parameter(s) in question, if necessary to identify the cause of the exceedance.

2. The permittee shall initiate actions identified in the approved contingency plan referenced in Section 5.0 and specific contingency measures identified in Section 2.6 to resolve any problems identified by the investigation which may have led to the AL exceedance. To implement any other corrective action the permittee shall obtain prior approval from ADEQ according to Section 2.6.6.

3. Within thirty (30) days of an AL exceedance, the permittee shall submit the laboratory results to the Groundwater Protection and Reuse Section per Section 2.7.5 along with a summary of the findings of the investigation, the cause of the exceedance, and actions taken to resolve the problem.

4. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.

2.6.2.2.1. Exceeding Permit Flow Limit

1. If the AL for average monthly flow in Section 4.2, Table 6: ROUTINE FLOW MONITORING: 6.90 mgd has been exceeded and the Sarival WRF (APP No. 583981) has not been commissioned, the permittee shall begin construction of the expansion to monitor under Table 7: ROUTINE FLOW MONITORING: Stage 2A Temporary Modifications – 7.17 mgd, or submit a report to the ADEQ Groundwater Protection and Reuse Section detailing the reasons it is not necessary to begin the next phase of construction. Acceptance of the report instead of beginning the next phase of construction requires ADEQ approval. After the Sarival WRF has come online, this phase is no longer valid, ADEQ shall be notified, and monitoring shall continue under Table 6: ROUTINE FLOW MONITORING: 6.90 mgd.

2. If the AL for average monthly flow in Section 4.2, Table 7: ROUTINE FLOW MONITORING: Stage 2A Temporary Modifications – 7.17 mgd has been exceeded and the Sarival WRF (APP No. 583981) has not been commissioned, the permittee shall begin construction of the expansion to monitor under Table 8: ROUTINE FLOW MONITORING: Stage 2B Temporary Modifications – 7.47 mgd, or submit a report to the ADEQ Groundwater Protection and Reuse Section detailing the reasons it is not necessary to begin the next phase of construction.

Acceptance of the report instead of beginning the next phase of construction requires ADEQ approval. After the Sarival WRF has come online, this phase is no longer valid, ADEQ shall be notified, and monitoring shall continue under Table 6: ROUTINE FLOW MONITORING: 6.90 mgd.

3. If the AL for average monthly flow in Section 4.2, Table 8: ROUTINE FLOW MONITORING: Stage 2B Temporary Modifications – 7.47 mgd has been exceeded, the permittee shall submit an application to the Groundwater Protection and Reuse Section for an APP amendment to expand the WRF, or submit a report detailing the reasons an expansion is not necessary. Acceptance of the report instead of an application for expansion requires ADEQ approval.
4. After the Sarival WRF has come online, if the AL for average monthly flow in Section 4.2, Table 6: ROUTINE FLOW MONITORING: 6.90 mgd has been exceeded, the permittee shall submit an application to the Groundwater Protection and Reuse Section for a permit amendment to expand the treatment facility, or submit a report detailing the reasons an expansion is not necessary. Acceptance of the report instead of an application for amendment requires ADEQ approval. After the Sarival WRF has come online, this permit shall be amended to remove the temporary improvements in accordance with Section 3.0 Compliance Schedule.

2.6.2.3. Exceeding of Alert Levels in Groundwater Monitoring

2.6.2.3.1. Alert Levels for Indicator Parameters

Not applicable - groundwater monitoring is not required under this permit.

2.6.2.3.2. Alert Levels for Pollutants with Numeric Aquifer Water Quality Standards

Not applicable - groundwater monitoring is not required under this permit.

2.6.2.3.3. Alert Levels to Protect Downgradient Users from Pollutants without Numeric Aquifer Water Quality Standards

Not applicable - groundwater monitoring is not required under this permit.

2.6.2.3.4. Alert Level for Groundwater Level

Not applicable - groundwater monitoring is not required under this permit

2.6.3. Discharge Limit Violation

1. If a DL set in Section 4.2, Table 9: ROUTINE DISCHARGE MONITORING or Table 10: RECLAIMED WATER MONITORING has been violated, the permittee shall immediately investigate to determine the cause. The investigation shall include the following:
    a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the violation;
    b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences;
    c. If the investigation procedures indicated in (a) and (b) above fail to reveal the cause of the violation, the permittee shall sample individual waste streams composing the wastewater for the parameters in violation, as necessary to identify the cause of the violation.

The permittee shall submit a report to the Groundwater Protection and Reuse Section according to Section 2.7.3, which includes a summary of the findings of the investigation, the cause of the violation, and actions taken to resolve the problem. The permittee shall consider and ADEQ may require corrective action that may include control of the source of discharge, cleanup of affected soil, surface water or

groundwater, notification of downstream or downgradient users who may be directly affected by the discharge, and mitigation of the impact of pollutants on existing uses of the aquifer. Corrective actions shall either be specifically identified in this permit, included in an ADEQ-approved contingency plan, or separately approved according to Section 2.6.6.

2. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions, or other actions.

2.6.4. Aquifer Quality Limit Violation

Not applicable - groundwater monitoring is not required under this permit.

2.6.5. Emergency Response and Contingency Requirements for Unauthorized Discharges

[A.R.S. § 49-201(12) AND PURSUANT TO A.R.S. § 49-241]

2.6.5.1. Duty to Respond

The permittee shall act immediately to correct any condition resulting from a discharge pursuant to A.R.S. § 49-201(12) if that condition could pose an imminent and substantial endangerment to public health or the environment.

2.6.5.2. Discharge of Hazardous Substances or Toxic Pollutants

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of suspected hazardous substances (A.R.S. § 49-201(19)) or toxic pollutants (A.R.S. § 49-243(I)) on the facility site, the permittee shall promptly isolate the area and attempt to identify the discharged material. The permittee shall record information, including name, nature of exposure and follow-up medical treatment, if necessary, on persons who may have been exposed during the incident. The permittee shall notify the Groundwater Protection and Reuse Section within 24 hours of discovering the discharge of hazardous material which (a) has the potential to cause an AWQS exceedance, or (b) could pose an endangerment to public health or the environment.

2.6.5.3. Discharge of Non-Hazardous Materials

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of non-hazardous materials from the facility, the permittee shall promptly attempt to cease the discharge and isolate the discharged material. Discharged material shall be removed and the site cleaned up as soon as possible. The permittee shall notify the Groundwater Protection and Reuse Section within 24 hours of discovering the discharge of non-hazardous material which has the potential to cause an AWQS exceedance, or could pose an endangerment to public health or the environment.

2.6.5.4. Reporting Requirements

The permittee shall submit a written report for any unauthorized discharges reported under Sections 2.6.5.2 and 2.6.5.3 to the Groundwater Protection and Reuse Section per Section 2.7.5 within thirty (30) days of the discharge or as required by subsequent ADEQ action. The report shall summarize the event, including any human exposure, and facility response activities and include all information specified in Section 2.7.3. If a notice is issued by ADEQ subsequent to the discharge notification, any additional information requested in the notice shall also be submitted within the time frame specified in the notice. Upon review of the submitted report, ADEQ may require additional monitoring or corrective actions.

2.6.6. Corrective Actions

Specific contingency measures identified in Section 2.6 have already been approved by ADEQ and do not require written approval to implement.

With the exception of emergency response actions taken under Section 2.6.5, the permittee shall obtain written approval from the Groundwater Protection and Reuse Section prior to implementing a corrective action to accomplish any of the following goals in response to exceedance of an AL, DL, or another permit condition:

1. Control of the source of an unauthorized discharge;
2. Soil cleanup;
3. Cleanup of affected surface waters;
4. Cleanup of affected parts of the aquifer;
5. Mitigation to limit the impact of pollutants on existing uses of the aquifer.

Within thirty (30) days of completion of any corrective action, the operator shall submit to the Groundwater Protection and Reuse Section per Section 2.7.5, a written report describing the causes, impacts, and actions taken to resolve the problem.

2.7. REPORTING AND RECORDKEEPING REQUIREMENTS

[A.R.S. § 49-243(K)(2), A.A.C. R18-5-104, R18-9-A206(B), and R18-9-A207]

2.7.1. Self-Monitoring Report Form

1. The permittee shall complete the Self-Monitoring Reporting Forms (SMRFs) provided by ADEQ, and submit the completed report through the myDEQ online reporting system per Section 2.7.5. The permittee shall use the format devised by ADEQ.
2. The permittee shall complete the SMRF to the extent that the information reported may be entered on the form. If no information is required during a reporting period, the permittee shall enter "not required" on the form, include an explanation, and submit the form to the Groundwater Protection and Reuse Section.
3. The tables contained in Section 4.0 list the monitoring parameters and the frequencies for reporting results on the SMRF:
    a. Table 6: ROUTINE FLOW MONITORING: 6.90 mgd
    b. Table 7: ROUTINE FLOW MONITORING: Stage 2A Temporary Modifications – 7.17 mgd
    c. Table 8: ROUTINE FLOW MONITORING: Stage 2B Temporary Modifications – 7.47 mgd
    d. Table 9: ROUTINE DISCHARGE MONITORING
    e. Table 10: RECLAIMED WATER MONITORING

    The parameters listed in the above-identified tables from Section 4.0 are the only parameters for which SMRF reporting is required.

2.7.2. Operation Inspection / Log Book Recordkeeping

A signed copy of this permit shall be maintained at all times at the location where day-to-day decisions regarding the operation of the facility are made. A log book (paper copies, forms, or electronic data) of the inspections and measurements required by this permit shall be maintained at the location where day-to-day decisions are made regarding the operation of the facility. The log book shall be retained for ten years from

the date of each inspection, and upon request, the permit and the log book shall be made immediately available for review by ADEQ personnel. The information in the log book shall include, but not be limited to, the following information as applicable:

1. Name of inspector;
2. Date and shift inspection was conducted;
3. Condition of applicable facility components;
4. Any damage or malfunction, and the date and time any repairs were performed;
5. Documentation of sampling date and time; and
6. Any other information required by this permit to be entered in the log book.
7. Monitoring records for each measurement shall comply with A.A.C. R18-9-A206(B)(2).
8. Daily operator in direct responsible charge site visit sign-in to comply with R18-5-104.

2.7.3. Permit Violation and Alert Level Status Reporting

1. The permittee shall notify the Groundwater Protection and Reuse Section per Section 2.7.5 within five (5) days (except as provided in Section 2.6.5) of becoming aware of an AL exceedance, or violation of any permit condition, or DL for which notification requirements are not specified in Sections 2.6.2 through 2.6.5.
2. The permittee shall submit a written report to the Groundwater Protection and Reuse Section per Section 2.7.5 within thirty (30) days of becoming aware of the violation of any permit condition, or DL. The report shall document all of the following:
    a. Identification and description of the permit condition for which there has been a violation and a description of the cause;
    b. The period of violation including exact date(s) and time(s), if known, and the anticipated time period during which the violation is expected to continue;
    c. Any corrective action taken or planned to mitigate the effects of the violation, or to eliminate or prevent a recurrence of the violation;
    d. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an AWQS;
    e. Proposed changes to the monitoring which include changes in constituents or increased frequency of monitoring; and
    f. Description of any malfunction or failure of pollution control devices or other equipment or processes.

2.7.4. Operational, Other or Miscellaneous Reporting

The permittee shall record the information as required in Section 4.2, Table 11: FACILITY INSPECTION AND OPERATIONAL MONITORING in the facility log book as per Section 2.7.2, and report to the Groundwater Protection and Reuse Section any violations or exceedances as per Section 2.7.3.

If the treatment facility is classified for reclaimed water under this permit, the permittee shall submit the reclaimed water monitoring results and flow volumes to any of the following in accordance with A.A.C. R18-9-B701(C)(2)(c):

1. Any reclaimed water agent who has contracted for delivery of reclaimed water from the permittee; and

2. Any end user who has not waived interest in receiving this information.

2.7.5. Reporting Location

All Self-Monitoring Report Forms (SMRFs) shall be submitted through the myDEQ portal accessible on the ADEQ website at: http://www.azdeq.gov/welcome-mydeq. Contact at 602-771-4571 for any inquiry related to the SMRFs.

5-day and 30-day contingency notification and reports, laboratory reports, and verification sampling results required by this permit should be submitted through the myDEQ portal accessible on the ADEQ website at: http://www.azdeq.gov/welcome-mydeq.

If the required reports cannot be submitted, or require further documentation that cannot be submitted on the myDEQ portal, then submit items to APPContingencyreports@azdeq.gov or the address listed below:

The Arizona Department of Environmental Quality
Groundwater Protection and Reuse Section
1110 West Washington Street
Phoenix, Arizona 85007
Phone (602) 771-4999

2.7.6. Reporting Deadline

The following table lists the quarterly report due dates:

Table 3: QUARTERLY REPORTING DEADLINES	
Monitoring Conducted During Quarter:	**Quarterly Report Due By:**
January-March	April 30
April-June	July 30
July-September	October 30
October-December	January 30

The following table lists the semi-annual and annual report due dates if applicable:

Table 4: (SEMI-)ANNUAL REPORTING DEADLINES	
Monitoring Conducted:	**Report Due By:**
Semi-annual: January-June	July 30
Semi-annual: July-December	January 30
Annual: January-December	January 30

2.7.7. Changes to Facility Information in Section 1.0 and Section 2.0

The Groundwater Protection and Reuse Section shall be notified per Section 2.7.5 within ten days of any change of facility information including Facility Name, Permittee Name, Mailing or Street Address, Facility Contact Person, Certified Operator in Direct Responsible Charge or Emergency Telephone Number.

2.8. Temporary Cessation

[A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A209(A)]

The permittee shall give written notice to the Groundwater Protection and Reuse Section per Section 2.7.5 before ceasing operation of the facility for a period of 60 days or greater. The permittee shall take the following measures upon temporary cessation:

1. If applicable, direct the wastewater flows from the facility to another state-approved wastewater treatment facility;
2. Correct the problem that caused the temporary cessation of the facility; and

3. Notify the Groundwater Protection and Reuse Section with a monthly facility status report describing the activities conducted on the treatment facility to correct the problem.
4. Submittal of Self-Monitoring Report Forms (SMRFs) is still required; report "temporary cessation" in the comment section.

At the time of notification the permittee shall submit for ADEQ approval a plan for maintenance of discharge control systems and for monitoring during the period of temporary cessation. Immediately following ADEQ approval, the permittee shall implement the approved plan. If necessary, ADEQ shall amend permit conditions to incorporate conditions to address temporary cessation. During the period of temporary cessation, the permittee shall provide written notice to the Groundwater Protection and Reuse Section of the operational status of the facility every three years. If the permittee intends to permanently cease operation of any facility, the permittee shall submit closure notification, as set forth in Section 2.9 below.

2.9. Closure

[A.R.S. §§ 49-243(K)(6), 49-252 and A.A.C. R18-9-A209(B)]

For a facility addressed under this permit, the permittee shall give written notice of closure to the Groundwater Protection and Reuse Section per Section 2.7.5 of the intent to cease operation without resuming activity for which the facility was designed or operated. Submittal of SMRFs is still required; report "closure in process" in the comment section.

2.9.1. Closure Plan

Within 90 days following notification of closure, the permittee shall submit for approval to the Groundwater Protection and Reuse Section per Section 2.7.5, a closure plan which meets the requirements of A.R.S. § 49-252 and A.A.C. R18-9-A209(B)(3).

If the closure plan achieves clean-closure immediately, ADEQ shall issue a letter of approval to the permittee. If the closure plan contains a schedule for bringing the facility to a clean-closure configuration at a future date, ADEQ may incorporate any part of the schedule as an amendment to this permit.

2.9.2. Closure Completion

Upon completion of closure activities, the permittee shall give written notice to the Groundwater Protection and Reuse Section per Section 2.7.5 indicating that the approved closure plan has been implemented fully and providing supporting documentation to demonstrate that clean-closure has been achieved (soil sample results, verification sampling results, groundwater data, as applicable). If clean-closure has been achieved, ADEQ shall issue a letter of approval to the permittee at that time. If any of the following conditions apply, the permittee shall follow the terms of post-closure stated in this permit:

3. Clean-closure cannot be achieved at the time of closure notification or within one year thereafter under a diligent schedule of closure actions;
4. Further action is necessary to keep the facility in compliance with the AWQS at the applicable POC or, for any pollutant for which the AWQS was exceeded at the time this permit was issued, further action is necessary to prevent the facility from further degrading the aquifer at the applicable POC with respect to that pollutant;
5. Remedial, mitigative or corrective actions or controls are necessary to comply with A.R.S. § 49-201(36) and Title 49, Chapter 2, Article 3;
6. Further action is necessary to meet property use restrictions.
7. SMRF submittals are required until Clean Closure is issued.

2.10. Post-closure

[A.R.S. §§ 49-243(K)(6), 49-252 and A.A.C. R18-9 A209(C)]

Post-closure requirements shall be established based on a review of facility closure actions and will be subject to review and approval by the Groundwater Protection and Reuse Section.

In the event clean-closure cannot be achieved pursuant to A.R.S. § 49-252, the permittee shall submit for approval to the Groundwater Protection and Reuse Section a post-closure plan that addresses post-closure maintenance and monitoring actions at the facility. The post-closure plan shall meet all requirements of A.R.S. §§ 49-201(30) and 49-252 and A.A.C. R18-9-A209(C). Upon approval of the post-closure plan, this permit shall be amended or a new permit shall be issued to incorporate all post-closure controls and monitoring activities of the post-closure plan.

2.10.1. Post-Closure Plan

A specific post-closure plan may be required upon the review of the closure plan.

2.10.2. Post-Closure Completion

Not required at the time of permit issuance.

3.0 COMPLIANCE SCHEDULE

[A.R.S. § 49-243(K)(5) and A.A.C. R18-9-A208]

Unless otherwise indicated, for each compliance schedule item listed below, the permittee shall submit the required information to the Groundwater Protection and Reuse Section per Section 2.7.5.

Table 5: COMPLIANCE SCHEDULE ITEMS

No.	Description	Due By:	Permit Amendment Required?
Completion of Construction for Treatment Facilities			
1	The permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion in a format approved by the Department that confirms that the "Stage 2A Temporary Modifications" as described in Section 2.1 are complete according to the according to the Department-approved design report or plans and specifications, as applicable[1]. The permittee shall ensure that the financial assurance mechanism has been updated to cover Phase 2, prior to ADEQ approval.	Within 90 days of completion of construction the Stage 2A Improvements.	No
2	The permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion in a format approved by the Department that confirms that the "Stage 2B Temporary Modifications" as described in Section 2.1 are complete according to the according to the Department-approved design report or plans and specifications, as applicable.	Within 90 days of completion of construction the Stage 2B Improvements.	No
Transition back to Table 6: ROUTINE FLOW MONITORING: 6.90 mgd			
3	The permittee shall notify ADEQ when the "Sarival WRF" will be constructed and start operation, in order to return to monitoring under Table 6: ROUTINE FLOW MONITORING: 6.90 mgd and decommission the "Stage 2A/2B Temporary Improvements" and return FTR Basin 1 and 2 to SBR Basin 1 and 2.	Within ninety (90) days of the Sarival WRF commencing operation and within two (2) years of permit issuance	No
4	The permittee shall submit an APP "Other Amendment" application to remove the Stage 2A/2B Temporary Improvements from the permit. An Engineer's Certificate of Completion in a format approved by the Department that confirms that the "Stage 2B Temporary Modifications" as described in Section 2.1 have been removed from the site and the site has been restored according to the according to the Department-approved design report or plans and specifications, as applicable shall accompany the amendment application.	Within one (1) year of the Sarival WRF commencing operation	Yes

[1] The permittee may not increase their permitted capacity from a current Phase to another Phase while ADEQ has an enforcement action in place, including a Notice of Violation (NOV) of Consent/Compliance Order.

3.0 Compliance Schedule (Continued)

Financial Assurance Mechanism			
5	The permittee shall submit a demonstration that the financial assurance mechanism listed in Section 2.1, Financial Capability, is being maintained as per A.R.S. 49-243.N.4 and A.A.C. R18-9-A203(H) for all estimated closure and post-closure costs including updated costs submitted under Section 3.13, below. The demonstration shall include a statement that the closure and post-closure strategy has not changed, the discharging facilities listed in the permit have not been altered in a manner that would affect the closure and post-closure costs and discharging facilities have not been added. The demonstration shall also include information in support of a Letter of Credit as required in A.A.C. R18-9-A203(C)(5).	On or before July 1, 2029 and every 6 years for the duration of the permit.	No
6	The permittee shall submit updated cost estimates for facility closure and post-closure, as per A.A.C. R18-9-A201(B)(5) and A.R.S. 49-243.N.2.a, and an updated financial assurance demonstration for the updated cost estimate as per A.A.C. R18-9-A203.	On or before July 1, 2029 and every 6 years for the duration of the permit.	Yes

4.0 TABLES OF MONITORING REQUIREMENTS

4.1. PRE-OPERATIONAL MONITORING (OR CONSTRUCTION REQUIREMENTS)

Not applicable.

4.2. COMPLIANCE OR OPERATIONAL MONITORING

Table 6: ROUTINE FLOW MONITORING: 6.90 mgd[2]					
Sampling Point Number	**Sampling Point Identification**			**Latitude (North)**	**Longitude (West)**
1 – Effluent Flow Meter [3]	Flowmeter located after the Clearwell			33° 27' 55.1"	112° 21' 56.6"
Parameter	**Alert Level**	**Discharge Limit**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Total Effluent Flow[4]: Daily[5]	Not Applicable[6]	Not Applicable	mgd[7]	Daily	Quarterly
Total Effluent Flow: Monthly Average[8]	6.21	6.90	mgd	Monthly Calculation	Quarterly
Reuse Flow: Daily	Not Applicable	Not Applicable	mgd	Daily	Quarterly
Recharge Flow: Daily	Not Applicable	Not Applicable	mgd	Daily	Quarterly

Table 7: ROUTINE FLOW MONITORING: Stage 2A Temporary Modifications – 7.17 mgd[9]					
Sampling Point Number	**Sampling Point Identification**			**Latitude (North)**	**Longitude (West)**
1 – Effluent Flow Meter[3]	Flowmeter located after the Clearwell			33° 27' 55.1"	112° 21' 56.6"
Parameter	**Alert Level**	**Discharge Limit**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Total Effluent Flow[4]: Daily[5]	Not Applicable[6]	Not Applicable	mgd[7]	Daily	Quarterly
Total Effluent Flow: Monthly Average[8]	6.45	7.17	mgd	Monthly Calculation	Quarterly
Reuse Flow: Daily	Not Applicable	Not Applicable	mgd	Daily	Quarterly
Recharge Flow: Daily	Not Applicable	Not Applicable	mgd	Daily	Quarterly

[2] The monitoring under this table shall be continued until CSI No. 1 for "Stage 2A Temporary Modifications" has been accepted by the Department and shall be discontinued and the monitoring under Table 7 shall commence upon operation of the Stage 2A Temporary Modifications. Once the Sarival WRF has been constructed and is online, ADEQ shall be notified according to CSI No. 3 and monitoring shall revert back to this table.

[3] All wastewater flow measurement devices must be calibrated prior to the first year of reporting and recalibrated either biennially (every 2 years) or at the minimum frequency specified by the manufacturer. Wastewater flow measurement devices must be calibrated using the procedures specified by the device manufacturer.

[4] Total flow for all methods of disposal.

[5] Total Daily Flow shall be measured using a continuous recording flow meter that totals the flows daily.

[6] Not Applicable means that monitoring is required, but no limits have been specified at the time of permit issuance.

[7] mgd = million gallons per day.

[8] Monthly Average means the calculated average of daily flow values in a month.

[9] The monitoring under this table shall be continued until CSI No. 2 for "Stage 2B Temporary Modifications" has been accepted by the Department and shall be discontinued and the monitoring under Table 8 shall commence upon operation of the Stage 2B Temporary Modifications. Once the Sarival WRF has been constructed and is online, ADEQ shall be notified according to CSI No. 3 and monitoring shall revert back to Table 6.

Table 8: ROUTINE FLOW MONITORING: Stage 2B Temporary Modifications – 7.47 mgd[10]					
Sampling Point Number	**Sampling Point Identification**			**Latitude (North)**	**Longitude (West)**
1 – Effluent Flow Meter[3]	Flowmeter located after the Clearwell			33° 27' 55.1"	112° 21' 56.6"
Parameter	**Alert Level**	**Discharge Limit**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Total Effluent Flow[4]: Daily[5]	Not Applicable[6]	Not Applicable	mgd[7]	Daily	Quarterly
Total Effluent Flow: Monthly Average[8]	6.72	7.47	mgd	Monthly Calculation	Quarterly
Reuse Flow: Daily	Not Applicable	Not Applicable	mgd	Daily	Quarterly
Recharge Flow: Daily	Not Applicable	Not Applicable	mgd	Daily	Quarterly

[10] The monitoring under this table shall not be commenced until CSI No. 2 has been accepted by the Department for Stage 2B Temporary Modifications. Once the Sarival WRF has been constructed and is online, ADEQ shall be notified according to CSI No. 3 and monitoring shall revert back to Table 6.

Table 9: ROUTINE DISCHARGE MONITORING[11]					
Sampling Point Number	**Sampling Point Identification**			**Latitude (North)**	**Longitude (West)**
2 – Treated Effluent	After UV system			33° 27' 55.1"	112° 21' 56.7"
Parameter	**Alert Level**	**Discharge Limit**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Fecal Coliform: Single sample maximum	Not Applicable	23.0	MPN[12]	Daily[13]	Quarterly
Fecal Coliform: four (4) of seven (7) samples in a week[14]	Not Applicable	Non-detect[15]	MPN	Weekly Evaluation	Quarterly
Total Nitrogen[16] :Five-sample rolling geometric mean[17]	8	10	mg/l[18]	Monthly Calculation	Quarterly
Cyanide (as free cyanide)	0.16	0.2	mg/l	Quarterly	Quarterly
Fluoride	3.2	4.0	mg/l	Quarterly	Quarterly
Metals (Total)					
Antimony	0.0048	0.006	mg/l	Quarterly	Quarterly
Arsenic	0.04	0.05	mg/l	Quarterly	Quarterly
Barium	1.60	2.00	mg/l	Quarterly	Quarterly
Beryllium	0.0032	0.004	mg/l	Quarterly	Quarterly
Cadmium	0.004	0.005	mg/l	Quarterly	Quarterly
Chromium	0.08	0.1	mg/l	Quarterly	Quarterly
Lead	0.04	0.05	mg/l	Quarterly	Quarterly
Mercury	0.0016	0.002	mg/l	Quarterly	Quarterly
Nickel	0.08	0.1	mg/l	Quarterly	Quarterly
Selenium	0.04	0.05	mg/l	Quarterly	Quarterly
Thallium	0.0016	0.002	mg/l	Quarterly	Quarterly

[11] Routine Discharge Monitoring for this table shall be conducted for all Phases/Stages included in the permit.
[12] MPN = Most Probable Number / 100 ml sample. For MPN, a value of <2.2 shall be considered to be non-detect.
[13] For fecal coliform, "Daily" sampling means every day in which a sample can practicably be obtained and delivered in sufficient time for proper analysis, provided that no less than four samples in each week are obtained and analyzed.
[14] Week means a seven-day period starting on Sunday and ending on the following Saturday. The reporting form for this parameter consists of 13 weeks per quarter.
[15] For this table, fecal coliform 4 of 7 samples requires entering "Compliance" or "Non-compliance" on the SMRF for each week of the reporting period. Evaluate the daily fecal coliform results for that week (Sunday through Saturday). If, of these seven days, four or more of the daily fecal coliform results are non-detect, report "Compliance" for that week's entry on the SMRF. If three or fewer of the daily fecal coliform results are non-detect, report "Non-compliance" for that week's entry on the SMRF.
[16] Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen.
[17] The five-sample rolling geometric mean is determined by multiplying the five (5) most recent monthly sample values together then taking the fifth root of the product. *Example:* $GM_5 = \sqrt[5]{(m_1)(m_2)(m_3)(m_4)(m_5)}$.
[18] mg/l = milligrams per liter.

Table 9: ROUTINE DISCHARGE MONITORING (Continued)					
Sampling Point Number	**Sampling Point Identification**			**Latitude (North)**	**Longitude (West)**
2 – Treated Effluent	After UV system			33° 27' 55.1"	112° 21' 56.7"
Parameter	**Alert Level**	**Discharge Limit**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Volatile and Semi-Volatile Organic Compounds (VOCs and SVOCs)					
Benzene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Carbon tetrachloride	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
o-Dichlorobenzene	0.48	0.6	mg/l	Semi-Annually	Semi-Annually
para-Dichlorobenzene	0.06	0.075	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,1-Dichloroethylene	0.0056	0.007	mg/l	Semi-Annually	Semi-Annually
cis-1,2-Dichloroethylene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
trans-1,2-Dichloroethylene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Dichloromethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloropropane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Ethylbenzene	0.56	0.7	mg/l	Semi-Annually	Semi-Annually
Hexachlorobenzene	0.0008	0.001	mg/l	Semi-Annually	Semi-Annually
Hexachlorocyclopentadiene	0.04	0.05	mg/l	Semi-Annually	Semi-Annually
Monochlorobenzene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Styrene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Tetrachloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Toluene	0.8	1.0	mg/l	Semi-Annually	Semi-Annually
Trihalomethanes (total)[19]	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	0.16	0.2	mg/l	Semi-Annually	Semi-Annually
1,2,4 - Trichlorobenzene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
1,1,2 - Trichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Trichloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Vinyl Chloride	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Xylenes (Total)	8.0	10.0	mg/l	Semi-Annually	Semi-Annually

[19] Total Trihalomethanes (TTHMs) are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane

Table 10: RECLAIMED WATER MONITORING				
Reclaimed water monitoring under Table 10: RECLAIMED WATER MONITORING shall be performed in addition to routine discharge monitoring required under Section 4.2, Table 9: ROUTINE DISCHARGE MONITORING				
Sampling Point Number	**Sampling Point Identification**		**Latitude (North)**	**Longitude (West)**
2 – Treated Effluent	After UV system		33° 27' 55.1"	112° 21' 56.7"
Parameter	**Discharge Limit**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Fecal Coliform Single-sample maximum:	23.0	MPN[12]	Daily[13]	Quarterly
Fecal Coliform: Four (4) of last seven (7) samples	Non-detect[20]	MPN	Daily Evaluation	Quarterly
Total Nitrogen[16]: Five-sample rolling geometric mean[17]	10	mg/l[18]	Monthly Calculation	Quarterly
Turbidity[21]: Single reading	5.0	NTU[22]	Daily[23]	Quarterly
Turbidity: 24-hour average	2.0	NTU	Daily Calculation	Quarterly
Enteric Virus[24]: Four (4) of last seven (7) samples	Non-detect	MPN[12]	Monthly / Suspended[25]	Quarterly

[20] For this table, "Non-detect" requires entering "Compliance" or "Non-compliance" on the SMRF for each day of the reporting period. Evaluate the daily fecal coliform result along with the six (6) previous sample results. If four (4) or more of those results are non-detect, report "Compliance" for that day's entry on the SMRF. If four (4) or more of those results have detections of fecal coliform, report "Non-compliance" for that day's entry

[21] Turbidimeter shall be placed at a point in the wastewater treatment process after filtration and immediately before disinfection and shall have a signal averaging time not exceeding 120 seconds. All exceedances must be explained and submitted to the Department with the corresponding quarterly SMRF; occasional spikes due to back-flushing or instrument malfunction shall not be considered an exceedance.

[22] NTU = Nephelometric Turbidity Units

[23] For the single turbidity reading, daily means the maximum reading during the 24-hour period.

[24] Initial monthly enteric virus sampling shall be performed to indicate four (4) out of seven (7) sample results of non-detect.

[25] Enteric virus sampling shall resume only when the discharge limit for the 24-hour average for turbidity is exceeded for two (2) consecutive 24-hour monitoring periods. Monthly enteric virus monitoring shall continue until four (4) out of seven (7) consecutive sample results show no detection. During times when enteric virus sampling is suspended, enter "suspended" in the appropriate space on the SMRF

Table 11: FACILITY INSPECTION AND OPERATIONAL MONITORING			
The permittee shall record the inspection performance levels in a log book as per Section 2.7.2, and report any violations or exceedances as per Section 2.7.3. In the case of an exceedance, identify which structure exceeds the performance level in the log book.			
Pollution Control Structure/Parameter	**Performance Level**	**Inspection Frequency**	**Reporting Frequency**
Pump Integrity	Good working condition	Daily	See Section 2.7.3
Treatment Plant Components	Good working condition	Daily	
Basin (SBR and FTR) Tank Freeboard	One (1) Linear Foot	Daily	
Sludge Holding Tanks Freeboard	One (1) Linear Foot	Daily	
Chlorine Residual prior to entry into reclaimed water distribution system	No greater than 4 mg/L	Daily	
Headworks and Solids Handling Ionization Odor Control Systems	Good working condition	Quarterly	
Chemical Wet Scrubber Odor Control Units	Good working condition H_2S and flow	Quarterly	
Activated Carbon systems	Good working condition H_2S and flow	Quarterly	
Stage 2A/2B Temporary Modifications			
MLSS Pumps and piping to Frac Tanks	No leaks and in good working order	Daily	See Section 2.7.3
FTR Frac Tank Clarifiers Scum	Scum removed from top of tanks	Daily	
Frac Tank Clarifiers Freeboard	One (1) Linear Foot	Daily	
Piping from Frac Tanks to FTR basins	No leaks and in good working order	Daily	

5.0 REFERENCES AND PERTINENT INFORMATION

The terms and conditions set forth in this permit have been developed based upon the information contained in the following, which are on file with the Department:

APP Application, dated:	December 16, 2022; [Design Report Resubmittal 03/03/2023]
Updated closing costs	July 14, 2023
Contingency Plan, dated:	November 7, 2022 [Stage 2 Modifications Addendum is necessary]

6.0 NOTIFICATION PROVISIONS

6.1. Annual Registration Fees

The permittee is notified of the obligation to pay an Annual Registration Fee to ADEQ. The Annual Registration Fee is based on the amount of daily influent or discharge of pollutants in gallons per day (gpd) as established by A.R.S. § 49-242.

6.2. Duty to Comply

[A.R.S. §§ 49-221 through 263]

The permittee is notified of the obligation to comply with all conditions of this permit and all applicable provisions of Title 49, Chapter 2, Articles 1, 2 and 3 of the Arizona Revised Statutes, Title 18, Chapter 9, Articles 1 through 4, and Title 18, Chapter 11, Article 4 of the Arizona Administrative Code. Any permit non-compliance constitutes a violation and is grounds for an enforcement action pursuant to Title 49, Chapter 2, Article 4 or permit amendment, suspension, or revocation.

6.3. Duty to Provide Information

[A.R.S. §§ 49-243(K)(2) and 49-243(K)(8)]

The permittee shall furnish to the Director, or an authorized representative, within a time specified, any information which the Director may request to determine whether cause exists for amending or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

6.4. Compliance with Aquifer Water Quality Standards

[A.R.S. §§ 49-243(B)(2) and 49-243(B)(3)]

The permittee shall not cause or contribute to a violation of an Aquifer Water Quality Standard (AWQS) at the applicable point of compliance (POC) for the facility. Where, at the time of issuance of the permit, an aquifer already exceeds an AWQS for a pollutant, the permittee shall not discharge that pollutant so as to further degrade, at the applicable point of compliance for the facility, the water quality of any aquifer for that pollutant.

6.5. Technical and Financial Capability

[A.R.S. §§ 49-243(K)(8) and 49-243(N) and A.A.C. R18-9-A202(B) and R18-9-A203(E) and (F)]

The permittee shall have and maintain the technical and financial capability necessary to fully carry out the terms and conditions of this permit. Any bond, insurance policy, trust fund, or other financial assurance mechanism provided as a demonstration of financial capability in the permit application, pursuant to A.A.C. R18-9-A203(C), shall be in effect prior to any discharge authorized by this permit and shall remain in effect for the duration of the permit.

6.6. Reporting of Bankruptcy or Environmental Enforcement

[A.A.C. R18-9-A207(C)]

The permittee shall notify the Director within five days after the occurrence of any one of the following:

1. the filing of bankruptcy by the permittee; or
2. the entry of any order or judgment not issued by the Director against the permittee for the enforcement of any environmental protection statute or rule.

6.7. Monitoring and Records

[A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A206]

The permittee shall conduct any monitoring activity necessary to assure compliance with this permit, with the applicable water quality standards established pursuant to A.R.S. §§ 49-221 and 49-223 and §§ 49-241 through 49-252.

6.8. Inspection and Entry

[A.R.S. §§ 49-1009, 49-203(B), and 49-243(K)(8)]

In accordance with A.R.S. §§ 41-1009 and 49-203(B), the permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to enter and inspect the facility as reasonably necessary to ensure compliance with Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes, and Title 18, Chapter 9, Articles 1 through 4 of the Arizona Administrative Code and the terms and conditions of this permit.

6.9. Duty to Modify

[A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A211]

The permittee shall apply for and receive a written amendment before deviating from any of the designs or operational practices authorized by this permit.

6.10. Permit Action: Amendment, Transfer, Suspension, and Revocation

[A.R.S. §§ 49-201, 49-241 through 251, A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213]

This permit may be amended, transferred, suspended, or revoked for cause, under the rules of the Department. The permittee shall notify the Groundwater Protection and Reuse Section in writing within 15 days after any change in the owner or operator of the facility. The notification shall state the permit number, the name of the facility, the date of property transfer, and the name, address, and phone number where the new owner or operator can be reached. The operator shall advise the new owner or operators of the terms of this permit and the need for permit transfer in accordance with the rules.

7.0 ADDITIONAL PERMIT CONDITIONS

7.1. Other Information

[A.R.S. § 49-243(K)(8)]

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, the permittee shall promptly submit the correct facts or information.

7.2. Severability

[A.R.S. §§ 49-201, 49-241 through 251, A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213]

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby. The filing of a request by the permittee for a permit action does not stay or suspend the effectiveness of any existing permit condition.

7.3. Permit Transfer

This permit may not be transferred to any other person except after notice to and approval of the transfer by the Department. No transfer shall be approved until the applicant complies with all transfer requirements as specified in A.A.C. R18-9-A212(B) and (C).

Exhibit 14

Wastewater Use Data Sheet

Exhibit 14 - Table of Flows at PVWRF

Year	Month	Av Flow MGD	Peak Flow MGD
2022	January	5.957	6.598
2022	February	5.887	6.393
2022	March	5.769	6.259
2022	April	5.958	6.370
2022	May	5.847	6.345
2022	June	5.830	6.418
2022	July	5.770	6.380
2022	August	5.808	6.157
2022	September	5.854	6.275
2022	October	5.968	6.376
2022	November	5.945	6.424
2022	December	5.855	6.197
2023	January	6.108	6.808
2023	February	6.088	6.620
2023	March	6.225	6.652
2023	April	6.230	6.657
2023	May	6.150	6.507
2023	June	5.995	6.649
2023	July	6.154	6.491
2023	August	6.317	7.219
2023	September	6.375	6.916
2023	October	6.389	7.270
2023	November	6.496	7.309
2023	December	6.297	6.846

Exhibit 15

ADEQ Policy

Scheiferstein, Paloma

From: Naveen Savarirayan <savarirayan.naveen@azdeq.gov>
Sent: Friday, April 14, 2023 3:11 PM
To: Trevor Baggiore; Randall Matas; Amanda Stone; Karen Peters; Edwin Slade; Veronica Cabral - AZDEQ; Jon Rezabek
Subject: Final 4.01 General Permit Policy (Pending Publication as an SPS)
Attachments: Final 4.01 Policy Pending Publication.pdf

[EXTERNAL] savarirayan.naveen@azdeq.gov

Hi All,

I want to thank everyone for your contributions in the drafting of this policy. Attached is the final policy pending its publication as an ADEQ Substantive Policy Statement (SPS). Although publication as an SPS is forthcoming, this policy is considered effective immediately. If you have any questions or concerns please reach out to Randall Matas or Trevor Baggiore.

Sincerely,

Naveen Savarirayan
Manager, Groundwater Protection Value Stream
Office: 602-771-2285
Mobile: 602-397-8395

azdeq.gov

Final Substantive Policy (Pending Publication) - 4.01 General Permits as it relates to WWTP Capacity

This draft substantive policy will assist both regulators and applicants on the approval process for 4.01 General Permits for Sewage Collection Systems (SCS) under the Aquifer Protection Program (APP) by clarifying the requirements that must be met by both applicants for a 4.01 GP and the downstream wastewater treatment plant (WWTP) providing service for the wastewater as it relates to the capacity of the WWTP to provide service to the 4.01 applicant. This policy incorporates the accompanying flowchart.

Definitions:

1. **AOC**: Approval of Construction (same meaning as **DA**)
2. **APP Permit Approved Capacity**: The treatment capacity authorized in the most recently issued APP Permit
3. **ATC**: Approval to Construct (same meaning as **CA**)
4. **CA**: Construction Authorization (ADEQ terminology)
5. **Capacity Assurance Form**: Form Required as part of **CA/ATC** application submittal (https://static.azdeq.gov/forms/scs_facility.pdf)
6. **Constructed Capacity**: Actual design flow of the components of the facility that have been built and are fully functional and in compliance with the current APP Permit
7. **DA**: Discharge Authorization (ADEQ terminology)
8. **Facility**: Downstream Receiving WWTP
9. **Operational Flow**: The maximum monthly average flow in the preceding 12-months. For the purpose of this policy flow is measured as effluent from a WWTP.
10. **Total Commitment**s: Summation of all capacity assurances issued by the receiving facility for which actual discharge has not occurred
11. **Total Committed Capacit**y: Means **Operational Flow** plus **Total Commitments**

Arizona Administrative Code (A.A.C.) R18-9-E301(C)(1) requires an applicant to provide a signed statement by the owner or operator of the wastewater treatment facility that will be treating the sewage from the proposed sewage collection system.

The statement must be provided on the ADEQ form (CAPACITY ASSURANCE - SEWAGE TREATMENT FACILITY)[1] and shall include the following as noted on the form:

[1] https://static.azdeq.gov/forms/scs_facility.pdf

1. A statement that affirms that the additional volume of wastewater delivered to the wastewater treatment facility by the proposed sewage collection system will not cause any flow or effluent quality limits of the individual permit for the WWTP to be exceeded; and
2. The proposed volume of additional sewage to be processed by the WWTP from the new SCS; and
3. The **APP Approved Capacity** of the WWTP authorized in the most recently issued Aquifer Protection Program (APP) Permit; and
4. The **Constructed Capacity** and **Operational Flow** of the facility; and
5. The **Total Committed Capacity**. For the purpose of this policy **Total Committed Capacity** includes the sum of the **Operation Flow**, plus the **Total Commitments** provided by the WWTP on ADEQ's approved Capacity Assurance Form[2].

ADEQ interprets the language "A statement that affirms that the additional volume of wastewater delivered to the wastewater treatment facility by the proposed sewage collection system will not cause any flow…limits of the individual permit for the WWTP to be exceeded" to mean that the submission of a **Capacity Assurance Form** is a commitment from the WWTP to provide service to the applicant and is a reservation of capacity for the applicant. *Please note that other contractual agreements, regarding a reservation of capacity are solely the responsibility of the discharger and the utility.* ADEQ will not issue any approvals except those that have an accompanying **Capacity Assurance Form**.

Additional Notes:

1. Utilization of this policy requires at minimum an initial APP Permit that has been issued to the **Facility**. Once initial permitting coverage has been established, this policy can be utilized even if the Total Committed Capacity exceeds what was authorized under the initial APP Permit as long as all other requirements of the policy have been met including those specified in box 1 and box 2 of the accompanying flowchart.
2. A utility may submit to the regulating authority for approval a flow study based on best available data that may include analysis of actual data within the same or similar service area in order to achieve a lower design flow. If approved, the revised design flow may be utilized to retroactively recalculate the **Total Commitments**. The utility shall submit to the regulatory authority a complete list of all previously approved (i.e. CA/ ATC issued by regulatory authority) developments for which retroactive flow figures are to be applied, the original flow projected for each development on that list, and the revised flow projected for each development based on the study.
3. A utility may revise their **Total Commitments** to remove projects that have obtained CA/ATC approvals, but for which the timeframe to complete construction under the CA/ATC has expired *and* construction has not started. The utility shall advise the project applicant by letter that their project's capacity assurance is being retracted and shall copy the regulator. Expiration of a **CA/ATC** will require the applicant seeking discharge

[2] https://static.azdeq.gov/forms/scs_facility.pdf

to re-start the application process through the utility and the regulator using revised documentation.

4. In all cases, issuance of a **Construction Authorization** (**CA/ATC**) shall include a disclaimer stating the approval of a **Discharge Authorization** (**DA/AOC**) for the project is contingent upon **Constructed Capacity** being available at the time the **DA/AOC** application is submitted to the department.
5. This flowchart may not apply to situations where the facility is out of compliance with flow or effluent quality limits of the existing APP Permit. In such cases, applicability of this policy will be addressed on a case by case basis.

ADEQ and its delegated county/city partners will follow the accompanying flow chart for determining when to issue construction authorizations (CAs) (also called approvals to construct or ATCs by some delegated Counties).

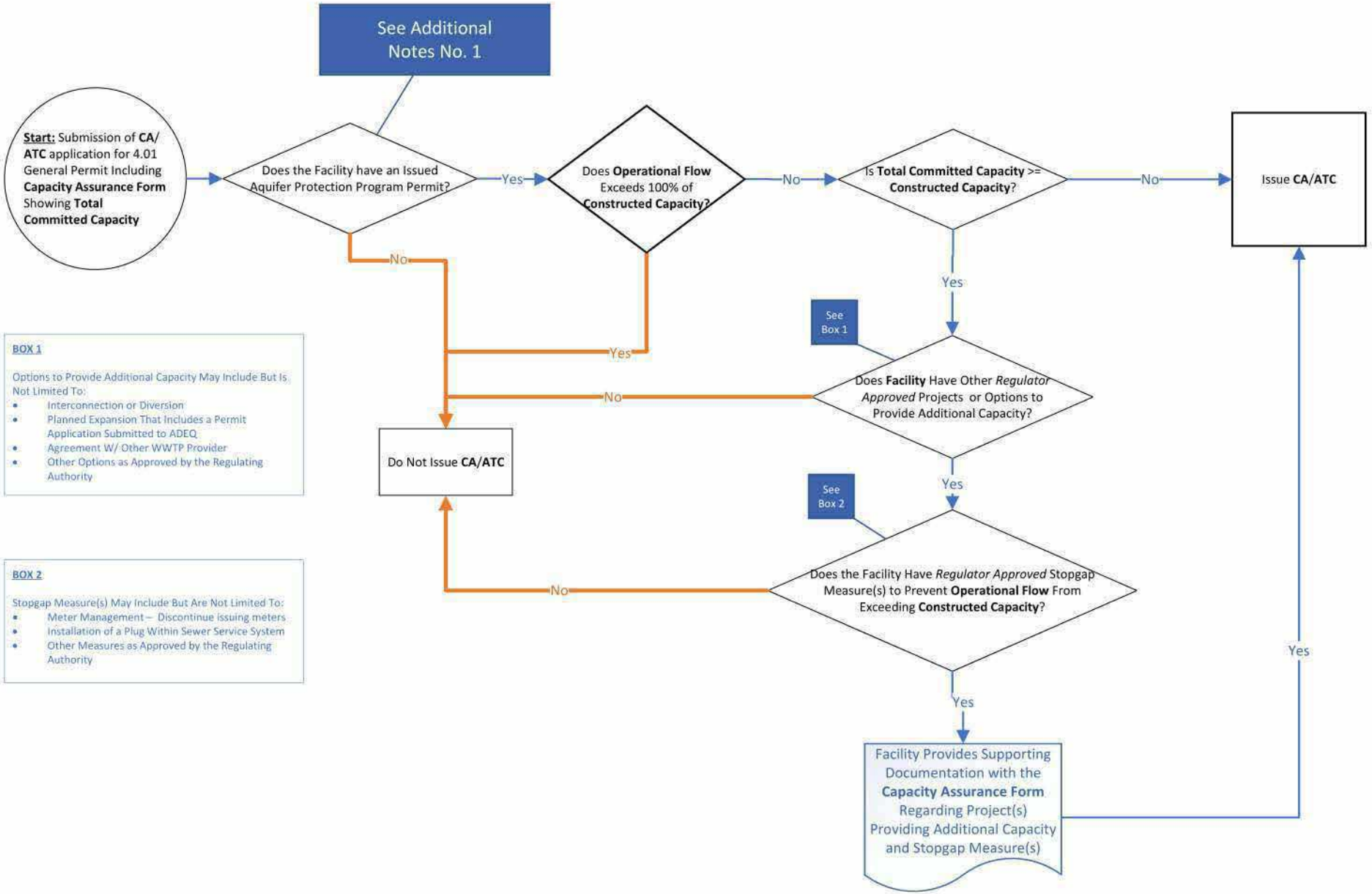

See Additional Notes No. 1
Start: Submission of CA/ ATC application for 4.01 General Permit Including Capacity Assurance Form Showing Total Committed Capacity
Does the Facility have an Issued Aquifer Protection Program Permit?
Yes
No
Does Operational Flow Exceeds 100% of Constructed Capacity?
Yes
No
Is Total Committed Capacity >= Constructed Capacity?
No
Issue CA/ATC
Yes
See Box 1
Does Facility Have Other Regulator Approved Projects or Options to Provide Additional Capacity?
No
Yes
Do Not Issue CA/ATC
See Box 2
Does the Facility Have Regulator Approved Stopgap Measure(s) to Prevent Operational Flow From Exceeding Constructed Capacity?
No
Yes
Yes
Facility Provides Supporting Documentation with the Capacity Assurance Form Regarding Project(s) Providing Additional Capacity and Stopgap Measure(s)
BOX 1
Options to Provide Additional Capacity May Include But Is Not Limited To:
Interconnection or Diversion
Planned Expansion That Includes a Permit Application Submitted to ADEQ
Agreement W/ Other WWTP Provider
Other Options as Approved by the Regulating Authority
BOX 2
Stopgap Measure(s) May Include But Are Not Limited To:
Meter Management – Discontinue issuing meters
Installation of a Plug Within Sewer Service System
Other Measures as Approved by the Regulating Authority

Exhibit 16

Sarival WRF ADEQ Aquifer Protection Permit

STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. P-513981
PLACE ID 224864, LTF 95217
NEW PERMIT

1.0 AUTHORIZATION

In compliance with the provisions of Arizona Revised Statutes (A.R.S.) Title 49, Chapter 2, Articles 1, 2, and 3, Arizona Administrative Code (A.A.C.) Title 18, Chapter 9, Articles 1 and 2, A.A.C. Title 18, Chapter 11, Article 4 and amendments thereto, and the conditions set forth in this permit, the Arizona Department of Environmental Quality (ADEQ) hereby authorizes Liberty Utilities to operate the Sarival Water Reclamation Facility (WRF) located at 1570 N. Sarival Ave., Goodyear, Arizona 85338 in Maricopa County, over the groundwater of the Phoenix Active Management Area.

This permit becomes effective on the date of the Water Quality Division Deputy Director's signature and shall be valid for the life of the facility (operational, closure, and post-closure periods) unless suspended or revoked pursuant to A.A.C. R18-9-A213. The permittee shall construct, operate and maintain the permitted facilities:

1. Following all the conditions of this permit including the design and operational information documented or referenced below, and
2. Such that Aquifer Water Quality Standards (AWQS) are not violated at the applicable point(s) of compliance (POC) set forth below or if an AWQS for a pollutant has been exceeded in an aquifer at the time of permit issuance, that no additional degradation of the aquifer relative to that pollutant and as determined at the applicable POC occurs as a result of the discharge from the facility.

1.1. PERMITTEE INFORMATION

Facility Name:	Sarival Water Reclamation Facility (WRF)
Facility Address:	1570 N. Sarival Ave., Goodyear, Arizona 85338
County:	Maricopa
Permitted Flow Rate:	4.4 million gallons per day
Permittee:	Liberty Utilities
Permittee Address:	14920 W. Camelback Rd., Litchfield, AZ 85340
Facility Contact:	Terry Gilbertson; Operations Manager (Terry.Gilbertson@libertyutilities.com)
Emergency Phone No.:	(623) 298 - 4825 **Mobile:** (623) 337 - 2210
Latitude/Longitude:	33° 27' 48.7" N / 112° 24' 46.9" W
Legal Description:	Township 01N, Range 02W, Section 01, N ½, NE ¼ of the Gila and Salt River Baseline and Meridian

1.2. AUTHORIZING SIGNATURE

DocuSigned by:
B394CB7051FD416...

Randall Matas, Deputy Director
Water Quality Division
Arizona Department of Environmental Quality

Signed this 25 day of January, 2023

THIS NEW PERMIT SUPERSEDES ALL PREVIOUS GENERAL PERMITS

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2.0 SPECIFIC CONDITIONS

[A.R.S. §§ 49-203(4), 49-241(A)]

2.1. FACILITY / SITE DESCRIPTION

[A.R.S. § 49-243(K)(8), and A.A.C. R18-5-114]

The permittee is authorized to operate the Sarival WRF, with a maximum average monthly flow of 4.4 mgd. The ADEQ has graded this facility as a Grade 4 wastewater treatment plant. The facility shall have an operator in direct responsible charge who is certified for the grade of the facility and inspects the facility Daily.

The Phase 1 Sarival WRF includes an existing influent pump station (IPS) which includes three (3) new 5.0 mgd pumps that lift influent to a headworks consisting of two (2) 6mm mechanical coarse screens, two (2) vortex grit removal units and classifiers, and two (2) perforated 2mm fine screens. The IPS and headworks are fully enclosed with a 4,000 CFM activated carbon media odor control system equipped with a mist eliminator (with spare element) and redundant fan. From the headworks, influent is mixed with return activated sludge (RAS) in a trough prior to being sent to two (2) Closed Loop Reactor (CLR) secondary treatment process trains. Each CLR contains an anoxic zone with two low-speed geared mixers, a swing zone and aeration zone with fine bubble diffusion. From the CLRs, mixed liquor suspended solids (MLSS) flows, via equalizer pipes, to a feed trough. From the feed trough, four (4) dedicated 9.1 mgd feed pumps feed MLSS to four (4) membrane bio-reactor (MBR) separation tanks. From the MBR trains, four (4) permeate pumps deliver effluent to two (2) chlorine contact basins that utilize sodium hypochlorite, and a final effluent reclamation pump station with three (3) recycled water pumps. Two (2) Waste Activated Sludge (WAS) pumps will convey sludge and scum from the MBR separation tanks/WAS Collection Pit to the Sludge Holding Tank (SHT) located at the Bio-solids Dewatering Building. The dewatering equipment will consist of an aerated SHT and two (2) centrifuges, as part of a packaged skid system, which will dewater sludge to a cake. The aerated WAS storage tank will have a nominal capacity of 12,000 gallons and a connection for emergency liquid hauling. In an emergency, liquid sludge can be transported to the Liberty's Palm Valley WRF (APP Inventory #100310) for storage and dewatering prior to disposal. The dewatered solids will be discharged to an off-loading conveyor and transferred to 20-ton roll-off bins. Dewatered solids, screenings and grit will be hauled off to an approved landfill for disposal. The biosolids dewatering building is fully enclosed with a 12,000 CFM activated carbon media odor control system equipped with a redundant fan.

The new Sarival WRF will utilize the existing Liberty effluent reuse distribution system, which currently supplies customers with Class A+ recycled water under valid reuse permits, and also provides groundwater recharge at Liberty's Sustainable Effluent Aquifer Project (SEAP) site (APP Inventory #514107) located at Northwest corner of Camelback Rd. and Bullard Ave. The existing Palm Valley effluent distribution system has an AZPDES permit (AZ0025712) and agreement with Roosevelt Irrigation District (RID) to discharge treated effluent (not requiring dechlorination) to their irrigation canal where it crosses under North Bullard Ave. Additionally, the Sarival WRF will have a new, second discharge point to the RID canal under a valid AZPDES permit (AZ0026425). This new discharge point will be located on the north side of the new treatment plant site and on the south side of the existing canal and will be designed to accommodate the full capacity of the effluent discharge pump station. Dechlorination is not required under this permit.

All industrial hookups and other non-residential hookups to the treatment system shall be authorized according to the applicable federal, state or local regulations.

The site includes the following permitted discharging facilities:

Table 1: DISCHARGING FACILITIES

Facility	Latitude	Longitude
Sarival WRF	33° 27' 48.5" N	112° 24' 47.0" W

2.1.1. Annual Registration Fee

[A.R.S. § 49-242 and A.A.C. R18-14-104]

The annual registration fee for this permit is payable to ADEQ each year. The annual registration fee flow rate is established by the permitted flow rate identified in Section 1.1. If the facility is not constructed or is incapable of discharge, the permittee may be eligible for reduced fees pursuant to A.A.C. R18-14-104(A), Table 2. Send all correspondence requesting reduced fees to the Groundwater Protection Value Stream. Please reference the permit number, LTF number, and the reason for requesting reduced fees under this rule.

2.1.2. Financial Capability

[A.R.S. § 49-243(N) and A.A.C. R18-9-A203]

The permittee has demonstrated financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The estimated dollar amount for facility closure is $1,540,100. The financial capability was demonstrated through A.A.C. R18-9-A203(C)(2) (3) (4) (5).

2.2. BEST AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY (BADCT)

[A.R.S. § 49-243(B) and A.A.C. R18-9-A202(A)(5)]

The treatment facility shall be designed, constructed, operated, and maintained to meet the treatment performance criteria for new facilities as specified in A.A.C. R18-9-B204. The facility shall meet the performance requirement for industrial pre-treatment as per A.A.C. R18-9-B204(B)(6)(b).

The treatment facility shall not exceed a maximum seepage rate of 550 gallons per day per acre for all containment structures within the treatment works.

2.2.1. Engineering Design

The treatment facility was designed as per the design plans and design report signed, dated, and sealed by James A. Matthews, P.E. (Civil #34090) of PACE Advanced Water Engineering dated October 7, 2022 (MCESD Complete Plans) and November 28, 2022 (Basis of Design Technical Memorandum), Application submittals received on August 19, 2022 and subsequent submittals.

2.2.2. Site-Specific Characteristics

Site specific characteristics were not used to determine BADCT.

2.2.3. Pre-Operational Requirements

Prior to initiating use of the Sarival WRF, the permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion in a format approved by the Department per Section 3.0, Table 5: COMPLIANCE SCHEDULE ITEMS, Item #2. The certificate shall be submitted to the Groundwater Protection Value Stream in accordance with Section 2.7.5.

Prior to initiating use of the Sarival WRF, Liberty Utilities shall ensure that a complete copy of the Operations and Maintenance manual has been delivered to the Sarival WRF to comply with Item #1 of Section 2.2.4.

2.2.4. Operational Requirements

1. The permittee shall maintain a copy of the up-to-date operations and maintenance manual at the treatment facility site at all times; the manual shall be available upon request during inspections by ADEQ personnel.
2. The pollution control structures shall be inspected for the items listed in Section 4.2, Table 9: FACILITY INSPECTION AND OPERATIONAL MONITORING

2.2.5. Reclaimed Water Classification

[A.A.C. R18-9-B701(C)(2)(a), A.A.C. R18-11-303 through 307]

The treatment facility is rated as producing reclaimed water meeting the Class A+ Reclaimed Water Quality Standards (A.A.C. R18-11, Article 3) which may be used for any allowable Class A, B, or C use under a valid reclaimed water permit (A.A.C. R18-9, Article 7).

2.2.6. Certified Areawide Water Quality Management Plan Conformance

[A.A.C. R18-9-A201(B)(6)(a)]

Facility operations must conform to the approved Certified Areawide Water Quality Management Plan according to the 208 consistency determination in place at the time of permit issuance.

2.3. DISCHARGE LIMITATIONS

[A.R.S. §§ 49-201(14), 49-243 and A.A.C. R18-9-A205(B)]

1. The permittee is authorized to operate the treatment facility with a maximum average monthly flow of 4.4 million gallons per day (mgd).
2. The permittee shall notify all users that the materials authorized to be disposed of through the treatment facility are typical household sewage and pre-treated commercial wastewater and shall not include motor oil, gasoline, paints, varnishes, hazardous wastes, solvents, pesticides, fertilizers or other materials not generally associated with toilet flushing, food preparation, laundry facilities and personal hygiene.
3. The permittee shall operate and maintain all permitted facilities to prevent unauthorized discharges pursuant to A.R.S. § 49-201(12) resulting from failure or bypassing of applicable BADCT.
4. Specific discharge limitations are listed in Section 4.2, Table 6: ROUTINE FLOW MONITORING and Table 7: ROUTINE DISCHARGE MONITORING.

2.4. POINT OF COMPLIANCE (POC)

[A.R.S. § 49-244]

The Points of Compliance (POCs) have been established at the following locations:

Table 2: POINT(S) OF COMPLIANCE

POC #	POC Location	Latitude	Longitude
1 (Conceptual)	Southwest Corner of the WRF	33° 27’ 46.45” N	112° 24’ 48.81” W

The depth to groundwater at the facility is approximately 135 feet below ground surface (bgs). The aquifer is unconfined to partially confined in the vicinity of the facility. The direction of flow is generally to the West.

Groundwater monitoring is not required at the point of compliance well. POC #1 well is a conceptual well, monitoring is not required except as a contingency action. The director may require an amendment of this permit to install a monitoring well if there is cause or concern that groundwater quality may be impacted at the POC. The Director may amend this permit to designate additional points of compliance if information on groundwater gradients or groundwater usage indicates the need.

2.5. MONITORING REQUIREMENTS

[A.R.S. § 49-243(K)(1), A.A.C. R18-9-A206(A)]

Unless otherwise specified in this permit, all monitoring required in this permit shall continue for the duration of the permit, regardless of the status of the facility. Unless otherwise provided, monitoring shall commence the first full monitoring period following permit issuance. All sampling, preservation and holding times shall be in accordance with currently accepted standards of professional practice. Trip blanks, equipment blanks and duplicate samples shall also be obtained, and Chain-of-Custody procedures shall be followed, in accordance with currently accepted standards of professional practice. Copies of laboratory analyses and Chain-of-Custody forms shall be maintained at the permitted facility. Upon request, these documents shall be made immediately available for review by ADEQ personnel.

2.5.1. Pre-Operational Monitoring

Not Applicable

2.5.2. Routine Discharge Monitoring

The permittee shall monitor the effluent according to Section 4.2, Table 7: ROUTINE DISCHARGE MONITORING. Representative samples of the effluent shall be collected at the point of discharge from the effluent auto sampler.

2.5.3. Reclaimed Water Monitoring

The permittee shall monitor the reclaimed water according to the Class A+ Reclaimed Water Monitoring Table in Section 4.2, Table 8: RECLAIMED WATER MONITORING in addition to the routine discharge monitoring parameters listed in Table 7: ROUTINE DISCHARGE MONITORING. Representative samples of the reclaimed water shall be collected at the point of discharge from the effluent auto sampler.

2.5.4. Facility / Operational Monitoring

Operational monitoring inspections shall be conducted according to Section 4.2, Table 9: FACILITY INSPECTION AND OPERATIONAL MONITORING.

If any damage of the pollution control structures is identified during inspection, proper repair procedures shall be performed. All repair procedures and materials used shall be documented in the facility log book as per Section 2.7.2 and reported to ADEQ in case of a violation or exceedance as per Section 2.7.3.

2.5.5. Groundwater Monitoring and Sampling Protocols

Not required at time of issuance.

2.5.6. Surface Water Monitoring and Sampling Protocols

Routine surface water monitoring is not required under the terms of this permit.

2.5.7. Analytical Methodology

All samples collected for compliance monitoring shall be analyzed using Arizona state-approved methods. If no state-approved method exists, then any appropriate EPA-approved method shall be used. Regardless of the method used, the detection limits must be sufficient to determine compliance with the regulatory limits of the parameters specified in this permit. If all methods have detection limits higher than the applicable limit, the permittee shall follow the applicable contingency requirements of Section 2.6 and may propose “other actions” including amending the permit to set higher limits. Analyses shall be performed by a laboratory licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification unless exempted under A.R.S. 36-495.02. For results to be considered valid, all analytical work shall meet quality control standards specified in the approved methods. A list of state-certified laboratories in Arizona can be obtained at the address below:

Arizona Department of Health Services
Office of Laboratory Licensure and Certification
250 North 17th Avenue
Phoenix, Arizona 85007
Phone: (602) 364-0720

2.5.8. Installation and Maintenance of Monitoring Equipment

Monitoring equipment required by this permit shall be installed and maintained so that representative samples required by the permit can be collected. If new groundwater wells are determined to be necessary, the construction details shall be submitted to the Groundwater Protection Value Stream for approval prior to installation and the permit shall be amended to include any new monitoring points.

2.6. CONTINGENCY PLAN REQUIREMENTS

[A.R.S. § 49-243(K)(3), (K)(7) and A.A.C. R18-9-A204 and R18-9-A205]

2.6.1. General Contingency Plan Requirements

At least one copy of this permit and the approved contingency and emergency response plan, submitted per Section 3.0 Table 5: COMPLIANCE SCHEDULE ITEMS No. 1, shall be maintained at the location where day-to-day decisions regarding the operation of the facility are made. The permittee shall be aware of and follow the contingency and emergency plans.

Any AL exceedance, or violation of a DL, or other permit condition shall be reported to ADEQ following the reporting requirements in Section 2.7.3, unless more specific reporting requirements are set forth in Section 2.6.2 through 2.6.5.

Some contingency actions involve verification sampling. Verification sampling shall consist of the first follow-up sample collected from a location that previously indicated a violation or the exceedance of an AL. Collection and analysis of the verification sample shall use the same protocols and test methods to analyze for the pollutant or pollutants that exceeded an AL or violated a DL. Where verification sampling is specified in this permit, it is the option of the permittee to perform such sampling. If verification sampling is not conducted within the timeframe allotted, ADEQ and the permittee shall presume the initial sampling result to be confirmed as if verification sampling had been conducted. The permittee is responsible for compliance with contingency plans relating to the exceedance of an AL or violation of a DL or any other permit condition. The permittee is subject to enforcement action for the failure to comply with any contingency actions in this permit.

2.6.2. Exceeding of Alert Levels and Performance Levels

2.6.2.1. Exceeding of Performance Levels Set for Operational Conditions

For freeboard performance levels, the permittee shall comply with the requirements as specified in Section 4.2, Table 9: FACILITY INSPECTION AND OPERATIONAL MONITORING to prevent the overtopping of a tank. If an impoundment/tank is overtopped, the permittee shall follow the requirements in Section 2.6.5.3 and the reporting requirements of Section 2.7.3.

If a performance level set in Section 4.2, Table 9: FACILITY INSPECTION AND OPERATIONAL MONITORING has been exceeded the permittee shall:

1. Notify the Groundwater Protection Value Stream within five (5) days of becoming aware of the exceedance per Section 2.7.5.
2. Submit a written report to the Groundwater Protection Value Stream within thirty (30) days after becoming aware of the exceedance per Section 2.7.5. The report shall document all of the following:
    a. A description of the exceedance and the cause of the exceedance;

b. The period of the exceedance, including exact date(s) and time(s), if known, and the anticipated time period during which the exceedance is expected to continue;

c. Any action taken or planned to mitigate the effects of the exceedance or spill, or to eliminate or prevent recurrence of the exceedance or spill;

d. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an AWQS; and

e. Any malfunction or failure of pollution control devices or other equipment or process.

3. The facility is no longer on alert status once the operational indicator no longer indicates that a performance level is being exceeded. The permittee shall, however, complete all tasks necessary to return the facility to its pre-alert operating condition.

2.6.2.2. Exceeding of Alert Levels (ALs) Set for Discharge Monitoring

1. If an AL set in Section 4.2, Table 7: ROUTINE DISCHARGE MONITORING has been exceeded, the permittee shall immediately investigate to determine the cause. The investigation shall include the following:

   a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the exceedance;

   b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences; and

   c. If the investigation procedures indicated in (a) and (b) above fail to reveal the cause of the exceedance, the permittee shall sample individual waste streams composing the wastewater for the parameter(s) in question, if necessary to identify the cause of the exceedance.

2. The permittee shall initiate actions identified in the approved contingency plan referenced in Section 2.6.1 and specific contingency measures identified in Section 2.6 to resolve any problems identified by the investigation which may have led to the AL exceedance. To implement any other corrective action the permittee shall obtain prior approval from ADEQ according to Section 2.6.6.

3. Within thirty (30) days of an AL exceedance, the permittee shall submit the laboratory results to the Groundwater Protection Value Stream per Section 2.7.5 along with a summary of the findings of the investigation, the cause of the exceedance, and actions taken to resolve the problem.

4. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.

2.6.2.2.1. Exceeding Permit Flow Limit

If the AL for average monthly flow in, Table 6: ROUTINE FLOW MONITORING has been exceeded, the permittee shall submit an application to the Groundwater Protection Value Stream for a permit amendment to expand the treatment facility, or submit a report detailing the reasons an expansion is not necessary. Acceptance of the report instead of an application for amendment requires ADEQ approval.

2.6.2.3. Exceeding of Alert Levels in Groundwater Monitoring

No ALs have been established for Groundwater Monitoring.

2.6.3. Discharge Limit Violation

1. If a DL set in Section 4.2, Table 7: ROUTINE DISCHARGE MONITORING or Table 8: RECLAIMED WATER MONITORING has been violated, the permittee shall immediately investigate to determine the cause. The investigation shall include the following:

    a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the violation;

    b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences;

    c. If the investigation procedures indicated in (a) and (b) above fail to reveal the cause of the violation, the permittee shall sample individual waste streams composing the wastewater for the parameters in violation, as necessary to identify the cause of the violation.

    The permittee shall submit a report to the Groundwater Protection Value Stream according to Section 2.7.3, which includes a summary of the findings of the investigation, the cause of the violation, and actions taken to resolve the problem. The permittee shall consider and ADEQ may require corrective action that may include control of the source of discharge, cleanup of affected soil, surface water or groundwater, notification of downstream or downgradient users who may be directly affected by the discharge, and mitigation of the impact of pollutants on existing uses of the aquifer. Corrective actions shall either be specifically identified in this permit, included in an ADEQ-approved contingency plan, or separately approved according to Section 2.6.6.

2. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions, or other actions.

2.6.4. Aquifer Quality Limit Violation

Not required at time of issuance.

2.6.5. Emergency Response and Contingency Requirements for Unauthorized Discharges

[A.R.S. § 49-201(12) AND PURSUANT TO A.R.S. § 49-241]

2.6.5.1. Duty to Respond

The permittee shall act immediately to correct any condition resulting from a discharge pursuant to A.R.S. § 49-201(12) if that condition could pose an imminent and substantial endangerment to public health or the environment.

2.6.5.2. Discharge of Hazardous Substances or Toxic Pollutants

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of suspected hazardous substances (A.R.S. § 49-201(19)) or toxic pollutants (A.R.S. § 49-243(I)) on the facility site, the permittee shall promptly isolate the area and attempt to identify the discharged material. The permittee shall record information, including name, nature of exposure and follow-up medical treatment, if necessary, on persons who may have been exposed during the incident. The permittee shall notify the Groundwater Protection Value Stream within 24 hours of discovering the discharge of hazardous material which (a) has the potential to cause an AWQS or (b) could pose an endangerment to public health or the environment.

2.6.5.3. Discharge of Non-Hazardous Materials

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of non-hazardous materials from the facility, the permittee shall promptly attempt to cease the discharge and isolate the discharged material. Discharged material shall be removed and the site cleaned up as soon as possible. The permittee shall notify the Groundwater Protection Value Stream within 24 hours of discovering the discharge of non-hazardous material which has the potential to cause an AWQS exceedance, or could pose an endangerment to public health or the environment.

2.6.5.4. Reporting Requirements

The permittee shall submit a written report for any unauthorized discharges reported under Sections 2.6.5.2 and 2.6.5.3 to the Groundwater Protection Value Stream per Section 2.7.5 within thirty (30) days of the discharge or as required by subsequent ADEQ action. The report shall summarize the event, including any human exposure, and facility response activities and include all information specified in Section 2.7.3. If a notice is issued by ADEQ subsequent to the discharge notification, any additional information requested in the notice shall also be submitted within the time frame specified in the notice. Upon review of the submitted report, ADEQ may require additional monitoring or corrective actions.

2.6.6. Corrective Actions

Specific contingency measures identified in Section 2.6 and the contingency plan approved as part of Section 3.0 Table 5: COMPLIANCE SCHEDULE ITEMS No. 1 have already been approved by ADEQ and do not require written approval to implement.

With the exception of emergency response actions taken under Section 2.6.5, the permittee shall obtain written approval from the Groundwater Protection Value Stream prior to implementing a corrective action to accomplish any of the following goals in response to exceedance of an AL, DL, or another permit condition:

1. Control of the source of an unauthorized discharge;
2. Soil cleanup;
3. Cleanup of affected surface waters;
4. Cleanup of affected parts of the aquifer;
5. Mitigation to limit the impact of pollutants on existing uses of the aquifer.

Within thirty (30) days of completion of any corrective action, the operator shall submit to the Groundwater Protection Value Stream per Section 2.7.5, a written report describing the causes, impacts, and actions taken to resolve the problem.

2.7. REPORTING AND RECORDKEEPING REQUIREMENTS

[A.R.S. § 49-243(K)(2), A.A.C. R18-5-104, R18-9-A206(B), and R18-9-A207]

2.7.1. Self-Monitoring Report Form

1. The permittee shall complete the Self-Monitoring Reporting Forms (SMRFs) provided by ADEQ, and submit the completed report through the myDEQ online reporting system per Section 2.7.5. The permittee shall use the format devised by ADEQ.
2. The permittee shall complete the SMRF to the extent that the information reported may be entered on the form. If no information is required during a reporting period, the permittee shall enter “not required” on the form, include an explanation, and submit the form to the Groundwater Protection Value Stream.
3. The tables contained in Section 4.0 list the monitoring parameters and the frequencies for reporting results on the SMRF:

a. Table 6: ROUTINE FLOW MONITORING

b. Table 7: ROUTINE DISCHARGE MONITORING

c. Table 8: RECLAIMED WATER MONITORING

The parameters listed in the above-identified tables from Section 4.0 are the only parameters for which SMRF reporting is required.

2.7.2. Operation Inspection / Log Book Recordkeeping

A signed copy of this permit shall be maintained at all times at the location where day-to-day decisions regarding the operation of the facility are made. A log book (paper copies, forms, or electronic data) of the inspections and measurements required by this permit shall be maintained at the location where day-to-day decisions are made regarding the operation of the facility. The log book shall be retained for ten years from the date of each inspection, and upon request, the permit and the log book shall be made immediately available for review by ADEQ personnel. The information in the log book shall include, but not be limited to, the following information as applicable:

1. Name of inspector;
2. Date and shift inspection was conducted;
3. Condition of applicable facility components;
4. Any damage or malfunction, and the date and time any repairs were performed;
5. Documentation of sampling date and time; and
6. Any other information required by this permit to be entered in the log book.
7. Monitoring records for each measurement shall comply with A.A.C. R18-9-A206(B)(2).
8. Daily operator in direct responsible charge site visit sign-in to comply with R18-5-104.

2.7.3. Permit Violation and Alert Level Status Reporting

1. The permittee shall notify the Groundwater Protection Value Stream per Section 2.7.5 within five (5) days (except as provided in Section 2.6.5) of becoming aware of an AL exceedance, or violation of any permit condition, or DL for which notification requirements are not specified in Sections 2.6.2 through 2.6.5.
2. The permittee shall submit a written report to the Groundwater Protection Value Stream per Section 2.7.5 within thirty (30) days of becoming aware of the violation of any permit condition, or DL. The report shall document all of the following:
    a. Identification and description of the permit condition for which there has been a violation and a description of the cause;
    b. The period of violation including exact date(s) and time(s), if known, and the anticipated time period during which the violation is expected to continue;
    c. Any corrective action taken or planned to mitigate the effects of the violation, or to eliminate or prevent a recurrence of the violation;
    d. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an AWQS;
    e. Proposed changes to the monitoring which include changes in constituents or increased frequency of monitoring; and
    f. Description of any malfunction or failure of pollution control devices or other equipment or processes.

2.7.4. Operational, Other or Miscellaneous Reporting

The permittee shall record the information as required in Section 4.2, Table 9: FACILITY INSPECTION AND OPERATIONAL MONITORING in the facility log book as per Section 2.7.2, and report to the Groundwater Protection Value Stream any violations or exceedances as per Section 2.7.3.

If the treatment facility is classified for reclaimed water under this permit, the permittee shall submit the reclaimed water monitoring results and flow volumes to any of the following in accordance with A.A.C. R18-9-B701(C)(2)(c):

1. Any reclaimed water agent who has contracted for delivery of reclaimed water from the permittee; and
2. Any end user who has not waived interest in receiving this information.

2.7.5. Reporting Location

All Self-Monitoring Report Forms (SMRFs) shall be submitted through the myDEQ portal accessible on the ADEQ website at: http://www.azdeq.gov/welcome-mydeq. Contact at 602-771-4571 for any inquiry related to the SMRFs.

5-day and 30-day contingency notification and reports, laboratory reports, and verification sampling results required by this permit should be submitted through the myDEQ portal accessible on the ADEQ website at: http://www.azdeq.gov/welcome-mydeq.

If the required reports cannot be submitted, or require further documentation that cannot be submitted on the myDEQ portal, then submit items to groundwaterpermits@azdeq.gov or the address listed below:

The Arizona Department of Environmental Quality
Groundwater Protection Value Stream
1110 West Washington Street
Phoenix, Arizona 85007
Phone (602) 771-4999

2.7.6. Reporting Deadline

The following table lists the quarterly report due dates:

Table 3: QUARTERLY REPORTING DEADLINES	
Monitoring Conducted During Quarter:	**Quarterly Report Due By:**
January-March	April 30
April-June	July 30
July-September	October 30
October-December	January 30

The following table lists the semi-annual and annual report due dates if applicable:

Table 4: (SEMI-)ANNUAL REPORTING DEADLINES	
Monitoring Conducted:	**Report Due By:**
Semi-annual: January-June	July 30
Semi-annual: July-December	January 30
Annual: January-December	January 30

2.7.7. Changes to Facility Information in Section 1.0 and Section 2.0

The Groundwater Protection Value Stream shall be notified per Section 2.7.5 within ten days of any change of facility information including Facility Name, Permittee Name, Mailing or Street Address, Facility Contact Person, Certified Operator in Direct Responsible Charge or Emergency Telephone Number.

2.8. Temporary Cessation

[A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A209(A)]

The permittee shall give written notice to the Groundwater Protection Value Stream per Section 2.7.5 before ceasing operation of the facility for a period of 60 days or greater. The permittee shall take the following measures upon temporary cessation:

1. If applicable, direct the wastewater flows from the facility to another state-approved wastewater treatment facility;
2. Correct the problem that caused the temporary cessation of the facility; and
3. Notify the Groundwater Protection Value Stream with a monthly facility status report describing the activities conducted on the treatment facility to correct the problem.
4. Submittal of Self-Monitoring Report Forms (SMRFs) is still required; report "temporary cessation" in the comment section.

At the time of notification the permittee shall submit for ADEQ approval a plan for maintenance of discharge control systems and for monitoring during the period of temporary cessation. Immediately following ADEQ approval, the permittee shall implement the approved plan. If necessary, ADEQ shall amend permit conditions to incorporate conditions to address temporary cessation. During the period of temporary cessation, the permittee shall provide written notice to the Groundwater Protection Value Stream of the operational status of the facility every three years. If the permittee intends to permanently cease operation of any facility, the permittee shall submit closure notification, as set forth in Section 2.9 below.

2.9. Closure

[A.R.S. §§ 49-243(K)(6), 49-252 and A.A.C. R18-9-A209(B)]

For a facility addressed under this permit, the permittee shall give written notice of closure to the Groundwater Protection Value Stream per Section 2.7.5 of the intent to cease operation without resuming activity for which the facility was designed or operated. Submittal of SMRFs is still required; report "closure in process" in the comment section.

2.9.1. Closure Plan

Within 90 days following notification of closure, the permittee shall submit for approval to the Groundwater Protection Value Stream per Section 2.7.5, a closure plan which meets the requirements of A.R.S. § 49-252 and A.A.C. R18-9-A209(B)(3).

If the closure plan achieves clean-closure immediately, ADEQ shall issue a letter of approval to the permittee. If the closure plan contains a schedule for bringing the facility to a clean-closure configuration at a future date, ADEQ may incorporate any part of the schedule as an amendment to this permit.

2.9.2. Closure Completion

Upon completion of closure activities, the permittee shall give written notice to the Groundwater Protection Value Stream per Section 2.7.5 indicating that the approved closure plan has been implemented fully and providing supporting documentation to demonstrate that clean-closure has been achieved (soil sample results, verification sampling results, groundwater data, as applicable). If clean-closure has been achieved, ADEQ shall issue a letter of approval to the permittee at that time. If any of the following conditions apply, the permittee shall follow the terms of post-closure stated in this permit:

1. Clean-closure cannot be achieved at the time of closure notification or within one year thereafter under a diligent schedule of closure actions;

2. Further action is necessary to keep the facility in compliance with the AWQS at the applicable POC or, for any pollutant for which the AWQS was exceeded at the time this permit was issued, further action is necessary to prevent the facility from further degrading the aquifer at the applicable POC with respect to that pollutant;
3. Remedial, mitigative or corrective actions or controls are necessary to comply with A.R.S. § 49-201(36) and Title 49, Chapter 2, Article 3;
4. Further action is necessary to meet property use restrictions.
5. SMRF submittals are required until Clean Closure is issued.

2.10. Post-closure

[A.R.S. §§ 49-243(K)(6), 49-252 and A.A.C. R18-9 A209(C)]

Post-closure requirements shall be established based on a review of facility closure actions and will be subject to review and approval by the Groundwater Protection Value Stream.

In the event clean-closure cannot be achieved pursuant to A.R.S. § 49-252, the permittee shall submit for approval to the Groundwater Protection Value Stream a post-closure plan that addresses post-closure maintenance and monitoring actions at the facility. The post-closure plan shall meet all requirements of A.R.S. §§ 49-201(30) and 49-252 and A.A.C. R18-9-A209(C). Upon approval of the post-closure plan, this permit shall be amended or a new permit shall be issued to incorporate all post-closure controls and monitoring activities of the post-closure plan.

2.10.1. Post-Closure Plan

A specific post-closure plan may be required upon the review of the closure plan.

2.10.2. Post-Closure Completion

Not required at the time of permit issuance.

3.0 COMPLIANCE SCHEDULE

[A.R.S. § 49-243(K)(5) and A.A.C. R18-9-A208]

Unless otherwise indicated, for each compliance schedule item listed below, the permittee shall submit the required information to the Groundwater Protection Value Stream per Section 2.7.5.

Table 5: COMPLIANCE SCHEDULE ITEMS

No.	Description	Due By:	Permit Amendment Required?
1	Submit a complete and up to date Emergency Operation/Contingency Plan (EOP). The EOP should have an appendix of Emergency contact numbers and cover emergency situations (e.g. FEMA).	Within 6 months of issuance of this permit.	No
2	The permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion in a format approved by the Department that confirms that the facility is constructed according to the Department-approved design report or plans and specifications, as applicable.	Prior to discharging under this permit and within 90 days of completion of construction.	No
3	The permittee shall submit a demonstration that the financial assurance mechanism listed in Section 2.1, Financial Capability, is being maintained as per A.R.S. 49-243.N.4 and A.A.C. R18-9-A203(H) for all estimated closure and post-closure costs including updated costs submitted under Section 3.13, below. The demonstration shall include a statement that the closure and post-closure strategy has not changed, the discharging facilities listed in the permit have not been altered in a manner that would affect the closure and post-closure costs and discharging facilities have not been added. The demonstration shall also include information in support of a Letter of Credit as required in A.A.C. R18-9-A203(C)(5).	On or before January 29, 2029 and every 6 years for the duration of the permit.	No
4	The permittee shall submit updated cost estimates for facility closure and post-closure, as per A.A.C. R18-9-A201(B)(5) and A.R.S. 49-243.N.2.a, and an updated financial assurance demonstration for the updated cost estimate as per A.A.C. R18-9-A203.	On or before January 29, 2029 and every 6 years for the duration of the permit.	Yes

4.0 TABLES OF MONITORING REQUIREMENTS

4.1. PRE-OPERATIONAL MONITORING (OR CONSTRUCTION REQUIREMENTS)

Not applicable.

4.2. COMPLIANCE OR OPERATIONAL MONITORING

Table 6: ROUTINE FLOW MONITORING					
Sampling Point Number	**Sampling Point Identification**			**Latitude (North)**	**Longitude (West)**
1 – Influent Flow Meter[1]	Influent Flow Meter			33° 27' 50.39"	112° 24' 47.57"
2 – RID Flow Meter	RID Alternative Discharge			33° 27' 52.65"	112° 24' 43.52"
3 – Reuse/Recharge Flow Meter	Reuse & SEAP Distribution System			33° 27' 49.53"	112° 24' 47.65"
Parameter	**Alert Level**	**Discharge Limit**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Influent Total Flow[2]: Daily[3]	Not Applicable[4]	Not Applicable	mgd[5]	Daily	Quarterly
Influent Total Flow: Monthly Average[6]	3.74	4.40	mgd	Monthly Calculation	Quarterly
RID Alt Discharge: Daily	Not Applicable	Not Applicable	mgd	Daily	Quarterly
RID Alt Discharge Flow: Monthly Average	3.74	4.40	mgd	Monthly Calculation	Quarterly
Liberty Reuse Dist. System[7] Flow: Daily	Not Applicable	Not Applicable	mgd	Daily	Quarterly
Liberty Reuse Dist. System Flow: Monthly Average	3.74	4.40	mgd	Monthly Calculation	Quarterly

[1] All wastewater flow measurement devices must be calibrated prior to the first year of reporting and recalibrated either biennially (every 2 years) or at the minimum frequency specified by the manufacturer. Wastewater flow measurement devices must be calibrated using the procedures specified by the device manufacturer.
[2] Influent Total Flow includes flows received from the conveyance system and sidestream/recycled flows from the Sarival WRF
[3] Total Daily Flow shall be measured using a continuous recording flow meter that totals the flows daily.
[4] Not Applicable means that monitoring is required, but no limits have been specified at the time of permit issuance
[5] mgd = million gallons per day
[6] Monthly Average means the calculated average of daily flow values in a month
[7] Liberty Utility's Effluent Reuse distribution system which also delivers flow to the Sustainable Effluent Aquifer Project (SEAP)

Table 7: ROUTINE DISCHARGE MONITORING					
Sampling Point Number	**Sampling Point Identification**			**Latitude (North)**	**Longitude (West)**
4 – Effluent Auto Sampler	After Disinfection			33° 27' 49.42"	112° 24' 47.57"
Parameter	**Alert Level**	**Discharge Limit**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Fecal Coliform: Single sample maximum	Not Applicable	23.0	MPN[8]	Daily[9]	Quarterly
Fecal Coliform: four (4) of seven (7) samples in a week[10]	Not Applicable	Non-detect[11]	MPN	Weekly Evaluation	Quarterly
Total Nitrogen[12] :Five-sample rolling geometric mean[13]	8.0	10.0	mg/l[14]	Monthly Calculation	Quarterly
Cyanide (as free cyanide)	0.16	0.2	mg/l	Quarterly	Quarterly
Fluoride	3.2	4.0	mg/l	Quarterly	Quarterly
Metals (Total)					
Antimony	0.0048	0.006	mg/l	Quarterly	Quarterly
Arsenic	0.04	0.05	mg/l	Quarterly	Quarterly
Barium	1.60	2.00	mg/l	Quarterly	Quarterly
Beryllium	0.0032	0.004	mg/l	Quarterly	Quarterly
Cadmium	0.004	0.005	mg/l	Quarterly	Quarterly
Chromium	0.08	0.1	mg/l	Quarterly	Quarterly
Lead	0.04	0.05	mg/l	Quarterly	Quarterly
Mercury	0.0016	0.002	mg/l	Quarterly	Quarterly
Nickel	0.08	0.1	mg/l	Quarterly	Quarterly
Selenium	0.04	0.05	mg/l	Quarterly	Quarterly
Thallium	0.0016	0.002	mg/l	Quarterly	Quarterly

[8] MPN = Most Probable Number / 100 ml sample. For MPN, a value of <2.2 shall be considered to be non-detect

[9] For fecal coliform, "daily" sampling means every day in which a sample can practicably be obtained and delivered in sufficient time for proper analysis, provided that no less than four samples in each week are obtained and analyzed

[10] Week means a seven-day period starting on Sunday and ending on the following Saturday. The reporting form for this parameter consists of 13 weeks per quarter

[11] Fecal coliform 4 of 7 samples requires entering "Compliance" or "Non-compliance" on the SMRF for each week of the reporting period. Evaluate the daily fecal coliform results for that week (Sunday through Saturday). If, of these seven days, four or more of the daily fecal coliform results are non-detect, report "Compliance" for that week's entry on the SMRF. If three or fewer of the daily fecal coliform results are non-detect, report "Non-compliance" for that week's entry on the SMRF

[12] Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen

[13] The five-sample rolling geometric mean is determined by multiplying the five (5) most recent monthly sample values together then taking the fifth root of the product. *Example:* $GM_5 = \sqrt[5]{(m_1)(m_2)(m_3)(m_4)(m_5)}$ (For the first four samples enter "Not Required" on SMRFs)

[14] mg/l = milligrams per liter

Table 7: ROUTINE DISCHARGE MONITORING (Continued)					
Sampling Point Number	**Sampling Point Identification**			**Latitude (North)**	**Longitude (West)**
4 – Effluent Auto Sampler	After Disinfection			33° 27' 49.42"	112° 24' 47.57"
Parameter	**Alert Level**	**Discharge Limit**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Volatile and Semi-Volatile Organic Compounds (VOCs and SVOCs)					
Benzene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Carbon tetrachloride	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
o-Dichlorobenzene	0.48	0.6	mg/l	Semi-Annually	Semi-Annually
para-Dichlorobenzene	0.06	0.075	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,1-Dichloroethylene	0.0056	0.007	mg/l	Semi-Annually	Semi-Annually
cis-1,2-Dichloroethylene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
trans-1,2-Dichloroethylene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Dichloromethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloropropane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Ethylbenzene	0.56	0.7	mg/l	Semi-Annually	Semi-Annually
Hexachlorobenzene	0.0008	0.001	mg/l	Semi-Annually	Semi-Annually
Hexachlorocyclopentadiene	0.04	0.05	mg/l	Semi-Annually	Semi-Annually
Monochlorobenzene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Styrene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Tetrachloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Toluene	0.8	1.0	mg/l	Semi-Annually	Semi-Annually
Trihalomethanes (total)[15]	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	0.16	0.2	mg/l	Semi-Annually	Semi-Annually
1,2,4 - Trichlorobenzene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
1,1,2 - Trichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Trichloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Vinyl Chloride	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Xylenes (Total)	8.0	10.0	mg/l	Semi-Annually	Semi-Annually

[15] Total Trihalomethanes (TTHMs) are comprised of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane

Table 8: RECLAIMED WATER MONITORING				
Reclaimed water monitoring under Table 8: RECLAIMED WATER MONITORING shall be performed in addition to routine discharge monitoring required under Section 4.2, Table 7: ROUTINE DISCHARGE MONITORING				
Sampling Point Number	**Sampling Point Identification**		**Latitude (North)**	**Longitude (West)**
4 – Effluent Auto Sampler[16]	After Disinfection		33° 27' 49.42"	112° 24' 47.57"
Parameter	**Discharge Limit**	**Units**	**Sampling Frequency**	**Reporting Frequency**
Fecal Coliform Single-sample maximum:	23.0	MPN[8]	Daily[9]	Quarterly
Fecal Coliform: Four (4) of last seven (7) samples in a week[10]	Non-detect[11]	MPN	Weekly Evaluation	Quarterly
Total Nitrogen[12]: Five-sample rolling geometric mean[13]	10.0	mg/l[14]	Monthly Calculation	Quarterly
Turbidity[17]: Single reading	5.0	NTU[18]	Daily[19]	Quarterly
Turbidity: 24-hour average	2.0	NTU	Daily Calculation	Quarterly
Enteric Virus[20]: Four (4) of last seven (7) samples	Non-detect	MPN[8]	Monthly / Suspended[21]	Quarterly

[16] Reuse enters the distribution system just after the Effluent Pump Station, so Routine Discharge and Reclaimed Water monitoring share the same sampling point. Fecal and Total Nitrogen samples collected and reported for Routine Discharge Monitoring may also be used for Reclaimed Water Monitoring.

[17] Turbidimeter shall be placed at a point in the wastewater treatment process after filtration and immediately before disinfection and shall have a signal averaging time not exceeding 120 seconds. All exceedances must be explained and submitted to the Department with the corresponding quarterly SMRF; occasional spikes due to back-flushing or instrument malfunction shall not be considered an exceedance

[18] NTU = Nephelometric Turbidity Units

[19] For the single turbidity reading, daily means the maximum reading during the 24-hour period.

[20] Initial monthly enteric virus sampling shall be performed to indicate four (4) out of seven (7) sample results of non-detect.

[21] Enteric virus sampling shall resume only when the discharge limit for the 24-hour average for turbidity is exceeded for two (2) consecutive 24-hour monitoring periods. Monthly enteric virus monitoring shall continue until four (4) out of seven (7) consecutive sample results show no detection. During times when enteric virus sampling is suspended, enter "suspended" in the appropriate space on the SMRF

Table 9: FACILITY INSPECTION AND OPERATIONAL MONITORING			
The permittee shall record the inspection performance levels in a log book as per Section 2.7.2, and report any violations or exceedances as per Section 2.7.3. In the case of an exceedance, identify which structure exceeds the performance level in the log book.			
Pollution Control Structure/Parameter	**Performance Level**	**Inspection Frequency**	**Reporting Frequency**
Sludge Holding Tank (SHT) Freeboard	One (1) Linear Foot	Daily	See Section 2.7.3
Closed Loop Reactors (CLRs) Freeboard	One (1) Linear Foot	Daily	
Membrane Separation Tanks Freeboard	One (1) Linear Foot	Daily	
IPS & Headworks Structure	No visible structural damage, or leakage	Weekly	
Membrane Tanks, CLRs & SHT Structure	No visible structural damage, or leakage	Weekly	
Pump Integrity	Good working condition	Weekly	
Treatment Plant Components	Good working condition	Weekly	
Vegetation Removal around tanks/structures	No vegetation present in the tanks or within five feet of the tanks or treatment structures	Monthly	
WRF Activated Carbon Odor Control Systems	Good working condition H_2S and flow	Monthly	

5.0 REFERENCES AND PERTINENT INFORMATION

The terms and conditions set forth in this permit have been developed based upon the information contained in the following, which are on file with the Department:

APP Application, dated: 08/08/2022 and subsequent submittals

Contingency Plan, dated: To be submitted as part of:

Section 3.0 COMPLIANCE SCHEDULE
Table 5: COMPLIANCE SCHEDULE ITEMS; Item #1

6.0 NOTIFICATION PROVISIONS

6.1. Annual Registration Fees

The permittee is notified of the obligation to pay an Annual Registration Fee to ADEQ. The Annual Registration Fee is based on the amount of daily influent or discharge of pollutants in gallons per day (gpd) as established by A.R.S. § 49-242.

6.2. Duty to Comply

[A.R.S. §§ 49-221 through 263]

The permittee is notified of the obligation to comply with all conditions of this permit and all applicable provisions of Title 49, Chapter 2, Articles 1, 2 and 3 of the Arizona Revised Statutes, Title 18, Chapter 9, Articles 1 through 4, and Title 18, Chapter 11, Article 4 of the Arizona Administrative Code. Any permit non-compliance constitutes a violation and is grounds for an enforcement action pursuant to Title 49, Chapter 2, Article 4 or permit amendment, suspension, or revocation.

6.3. Duty to Provide Information

[A.R.S. §§ 49-243(K)(2) and 49-243(K)(8)]

The permittee shall furnish to the Director, or an authorized representative, within a time specified, any information which the Director may request to determine whether cause exists for amending or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

6.4. Compliance with Aquifer Water Quality Standards

[A.R.S. §§ 49-243(B)(2) and 49-243(B)(3)]

The permittee shall not cause or contribute to a violation of an Aquifer Water Quality Standard (AWQS) at the applicable point of compliance (POC) for the facility. Where, at the time of issuance of the permit, an aquifer already exceeds an AWQS for a pollutant, the permittee shall not discharge that pollutant so as to further degrade, at the applicable point of compliance for the facility, the water quality of any aquifer for that pollutant.

6.5. Technical and Financial Capability

[A.R.S. §§ 49-243(K)(8) and 49-243(N) and A.A.C. R18-9-A202(B) and R18-9-A203(E) and (F)]

The permittee shall have and maintain the technical and financial capability necessary to fully carry out the terms and conditions of this permit. Any bond, insurance policy, trust fund, or other financial assurance mechanism provided as a demonstration of financial capability in the permit application, pursuant to A.A.C. R18-9-A203(C), shall be in effect prior to any discharge authorized by this permit and shall remain in effect for the duration of the permit.

6.6. Reporting of Bankruptcy or Environmental Enforcement

[A.A.C. R18-9-A207(C)]

The permittee shall notify the Director within five days after the occurrence of any one of the following:

1. the filing of bankruptcy by the permittee; or
2. the entry of any order or judgment not issued by the Director against the permittee for the enforcement of any environmental protection statute or rule.

6.7. Monitoring and Records

[A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A206]

The permittee shall conduct any monitoring activity necessary to assure compliance with this permit, with the applicable water quality standards established pursuant to A.R.S. §§ 49-221 and 49-223 and §§ 49-241 through 49-252.

6.8. Inspection and Entry

[A.R.S. §§ 49-1009, 49-203(B), and 49-243(K)(8)]

In accordance with A.R.S. §§ 41-1009 and 49-203(B), the permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to enter and inspect the facility as reasonably necessary to ensure compliance with Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes, and Title 18, Chapter 9, Articles 1 through 4 of the Arizona Administrative Code and the terms and conditions of this permit.

6.9. Duty to Modify

[A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A211]

The permittee shall apply for and receive a written amendment before deviating from any of the designs or operational practices authorized by this permit.

6.10. Permit Action: Amendment, Transfer, Suspension, and Revocation

[A.R.S. §§ 49-201, 49-241 through 251, A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213]

This permit may be amended, transferred, suspended, or revoked for cause, under the rules of the Department. The permittee shall notify the Groundwater Protection Value Stream in writing within 15 days after any change in the owner or operator of the facility. The notification shall state the permit number, the name of the facility, the date of property transfer, and the name, address, and phone number where the new owner or operator can be reached. The operator shall advise the new owner or operators of the terms of this permit and the need for permit transfer in accordance with the rules.

7.0 ADDITIONAL PERMIT CONDITIONS

7.1. Other Information

[A.R.S. § 49-243(K)(8)]

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, the permittee shall promptly submit the correct facts or information.

7.2. Severability

[A.R.S. §§ 49-201, 49-241 through 251, A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213]

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby. The filing of a request by the permittee for a permit action does not stay or suspend the effectiveness of any existing permit condition.

7.3. Permit Transfer

This permit may not be transferred to any other person except after notice to and approval of the transfer by the Department. No transfer shall be approved until the applicant complies with all transfer requirements as specified in A.A.C. R18-9-A212(B) and (C).

Exhibit 17

Notarized Affidavit on Behalf of

Liberty Litchfield Park

AFFIDAVIT OF DAVID SNOW

David Snow, being duly sworn, deposes and says:

1. I am a resident of Maricopa County, over 18 years of age, and make this affidavit based on my own personal knowledge.

2. I am an Engineer for Liberty Utilities.

3. The Application for an Extension of Liberty Litchfield Park's existing wastewater Certificates of Convenience and Necessity (CC&N), to which this affidavit is attached, was prepared under my supervision.

David Snow, P.E.

SUBSCRIBED and sworn to before me this 19th day of August, 2024.

Virginia P. Covarrubias
Notary Public

My Commission Expires:

June 09, 2026

Virginia P Covarrubias
Notary Public
Maricopa County, Arizona
My Comm. Expires 06-09-26
Commission No. 632108